

Developing a framework to assess the influence of the imposter phenomenon on critical leadership competencies

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Thesis accepted in fulfilment of the requirements for the degree [Doctor of Philosophy in Business Administration](#) at the North- West University

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DEDICATION

“a bird does not sing because it has an answer, it sings because it has a song”

Maya Angelo

To all impostors.
May you speak up, even if your voice trembles.

PREFACE

The paradox of the Impostor Phenomenon is fascinating:

Others believe in you. You don't believe in yourself.

Yet you believe in yourself instead of them.

If you doubt yourself, should you not also doubt your judgement of yourself?

When multiple individuals believe in you. It might be time to believe in them.

ACKNOWLEDGEMENTS

All glory to Him, who is able.

Ephesians 3:20

Special thanks to:

Prof PA Botha, my supervisor, for your patience, motivation and constant guidance during this adventure. Thank you for teaching me it's never too late to change direction.

Acknowledgement of the following authors for making use of their questionnaires: Fabio Ibrahim, Johnn-Christoph Münscher and Phillipp Yorck Herzberg (German-developed Impostor-Profile (IPP31)), Late, Dr Morris Rosenberg (Rosenberg self-esteem scale (RSE)), Prof Wim Myburgh (Managerial Decision-making Self-Efficacy Questionnaire (MDMSEQ)), and Alaa Eldin Abdel Hamid Ayoub, Soud Mohammad Almahamid, Luma F. Al Salah (Innovative Work Behaviour Scale).

I would like to thank the following individuals who have helped me undertake this research:

Prof Suria Ellis (NWU Statistical Services), my fairy godmother, assisted me in the data analysis. Ms Nicolize van der Walt (NWU Alumni Office), for the distribution of the questionnaires.

I would like to express my sincere gratitude to the National University Capacity Development Programme for the institutional Capacity Development Grant (UCDG), to finish this study.

My husband, Andrew Bowen, for always supporting my crazy ideas.

Ava, my daughter, you are my muse.

My friend and mentor, Anel Pletzer, for keeping me sane: our coffee dates meant a lot.

And lastly, my friend and colleague, Chantele Bloem, who unencouraged me to start this journey.

ABSTRACT

Purpose – This study aimed to develop a framework for assessing the influence of the Impostor Phenomenon on two critical leadership competencies and to establish if self-esteem acts as a mediator.

Real-world problem - The imposter phenomenon, characterised by persistent feelings of inadequacy and a fear of being exposed as a fraud despite evident accomplishments, can significantly impact a leader's self-esteem. This, in turn, can have profound implications for critical leadership competencies such as decision-making self-efficacy and innovative work behaviour. When leaders perceive themselves as imposters, they may doubt their abilities to make effective decisions, fearing that their choices are mere luck rather than informed judgment. This can lead to hesitancy, over-analysis, or a reluctance to take risks, hampering their decision-making self-efficacy. Additionally, the imposter phenomenon can stifle a leader's inclination to explore new and innovative approaches, as they may hesitate to showcase their ideas out of fear of being exposed as fraud if those ideas fail. This apprehension can hinder their willingness to encourage a culture of innovation among their teams and can discourage the pursuit of novel strategies or solutions. In the real world, this issue could lead to inhibited organisational growth, diminished creativity, and reduced agility in a rapidly evolving business landscape as leaders struggle to make confident decisions and foster innovative environments due to the negative impact of imposter feelings on their self-esteem.

Design/methodology/approach – The research questions draw on a comprehensive literature analysis on leadership and the Impostor Phenomenon. After gaps in the literature about the Impostor Phenomenon were discovered, as well as its intersectionality with the concepts of contextual leadership theory, research questions were formed. An integrative conceptual framework was developed, which included the Impostor Phenomenon's antecedents, impacts, mediators and leadership constructs, namely innovative work behaviour and decision-making self-efficacy. These hypotheses based on this framework were assessed with the means of the quantitative paradigm using a cross-sectional correlational questionnaire. The findings in the research provided answers to the questions and tested the hypotheses of this study. The population was 7000 managers from the NWU Alumni, represented using a convenience sample.

Findings – The Impostor Phenomenon negatively influences decision-making self-efficacy and innovative work behaviour. In this study, the following hypotheses were confirmed. The Impostor Phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour measuring instruments are valid and reliable in South Africa. Differences exist in the

Impostor Phenomenon of self-esteem, decision-making self-efficacy and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender, and sectors. Self-esteem mediates the relationship between the Impostor Phenomenon, decision-making self-efficacy, and innovative work behaviour.

Research limitations/implications – The key leadership competencies, namely, innovative work behaviour and decision-making self-efficacy, were the only leadership constructs included in this study of the impact of the Impostor Phenomenon on leader behaviour. Conclusions are only based on these constructs. As a result, it necessitates a more complex model of the Impostor Phenomenon that incorporates other pertinent leader characteristics, should a holistic impact of this phenomenon on leadership be considered. Furthermore, the leaders in South Africa are the subject of this investigation. As a result, the study's results do not apply to a global population.

Practical implications – This research is both theoretical and practical. By understanding the impact of this phenomenon better, a leader may determine the impact of the characteristics manifested by the Impostor Phenomenon if not managed correctly. It will assist a leader in understanding its impact on their capacity to lead, make decisions, take risks and be innovative, all of which influence their overall leader's abilities. The findings in this study enable managers/leaders to acknowledge the influence of the Impostor Phenomenon and therefore be able to make more effective decisions and demonstrate innovative behaviour despite the phenomenon's influence.

Originality/value – The study is significant because no research known at the time of this study has investigated the relationship between the Impostor Phenomenon and innovative work behaviour and decision-making self-efficacy in the South African leadership context. This study theme has yet to be empirically investigated. These results create awareness and propose a reason to overcome the Impostor Phenomenon. This study builds a new and substantial connection between the identified leadership constructs and the Impostor Phenomenon. The influence of the Imposter Phenomenon, if not managed, on leader behaviours, specifically related to leadership decision-making self-efficacy and Innovative Work Behaviour are highlighted. The influence of the Impostor Phenomenon on leadership competencies, namely innovative work behaviour and decision-making self-efficacy, was determined for leaders to identify, understand, manage, and control the impact of this phenomenon.

Aparna and Menon (2020) advanced the assertion that the existing body of evidence of the association between impostor phenomenon and leadership competencies is presently lacking

in sufficiency (Aparna & Menon, 2020). Nevertheless, their scholarly investigation formulates inferences concerning potential correlations between the impostor phenomenon and fundamental leadership comportments, notably encompassing the realms of decision-making and innovative work behaviour. Noteworthy is the existing gap wherein these postulated connections still need to be empirically tested. This study, in response, undertakes the imperative task of experimentally examining and substantiating these hypothesized relationships, thereby effectively bridging this scholarly gap.

Therefore, this study addresses a significant gap in the existing body of knowledge. Despite the growing recognition of the Impostor Phenomenon's impact on individuals' psychological well-being and professional development, there remains a notable absence of research exploring its intersection with innovative work behaviour and decision-making self-efficacy specifically within the South African leadership context. By delving into this uncharted territory, this study not only contributes to a deeper understanding of the complex psychological dynamics within leadership in a unique cultural and socio-economic setting but also offers invaluable insights into how the Impostor Phenomenon might influence key drivers of organisational success, such as innovation and effective decision-making. In a rapidly evolving global landscape, where diverse leadership strategies are essential for thriving organisations, unravelling these connections stands to make a significant scholarly.

Key terms

Decision-making self-efficacy, impostor phenomenon, innovative work behaviour, leadership competencies, framework, self-efficacy and self-esteem

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ABBREVIATIONS

Abbreviations	Meaning
CIP	Clance Impostor Phenomenon Scale
CFI	Comparative Fit Index
CFA	Confirmatory factor analysis
COR	Conservation of Resources Theory
CSEI	Coopersmith Self-Esteem Inventory
DSM	Diagnostic and Statistical Manual of Mental Disorders
EFA	Exploratory Factor Analysis
EI	Emotional Intelligence
EMS-REC	Economic and Management Sciences Research Ethics Committee
FFM	Five-Factor Model
HIP	Harvey Impostor Phenomenon
IP	Impostor phenomenon
Impostor	An individual who suffers from the Impostor phenomenon
IPP31	German-developed Impostor-Profile
IWB	Innovative Work Behaviour
JD-R	Job demands-resources model
KMO	Kaiser-Meyer-Olkin
MDMSEQ	Managerial Decision-Making Self-Efficacy Questionnaire
RMSEA	Roots Mean Square Error of Estimation
PTVE	Percentage of Total Variance explained
RSE	Rosenberg self-esteem scale
SCT's	Social and Policy Impact of Social Cognitive Theory
SEM	Standard Error of the Mean
SMC	Squared Multiple Correlation

CHAPTER 1

INTRODUCTION TO THE STUDY

Neil Gaiman, a brilliant English writer once wrote in his blog (Gaiman, 2017):

“Some years ago, I was lucky enough to be invited to a gathering of great and good individuals: artists and scientists, writers and discoverers of things. And I felt that at any moment they would realise that I didn’t qualify to be there, among these individuals who had done things.

On my second or third night there, I was standing at the back of the hall, while a musical entertainment happened, and I started talking to a very nice, polite, elderly gentleman about several things, including our shared first name. And then he pointed to the hall of individuals, and said words to the effect of, “I just look at all these individuals, and I think, what the heck am I doing here? They’ve made amazing things. I just went where I was sent.”

And I said, “Yes. But you were the first man on the moon. I think that counts for something.”

And I felt a bit better.

Because if Neil Armstrong felt like an impostor, maybe everyone did. Maybe there weren’t any grown-ups, only individuals who had worked hard and got lucky and were slightly out of their depth, all of us doing the best job we could, which is all we may hope for”

1.1 INTRODUCTION

Neil Armstrong experienced the Impostor Phenomenon (McGee, 2017). The Impostor Phenomenon (IP) is a psychological occurrence in which individuals feel that they are a fraud. As a result, these individuals often feel inadequate and question their belongingness and feelings of fraudulence (King & Cooley, 1995). According to estimates, over 70% of individuals will encounter the Imposter Phenomenon at some point in their lives (Roskowski, 2010). Some of the most famous and successful individuals have experienced these feelings: Maya Angelo, Albert Einstein, Michelle Obama and Lady Gaga (McGee, 2017).

Physicians Dr Suzanne Imes and Dr Pauline Clance invented the term “Imposter Phenomenon (IP)” in the mid-1970s to clarify that it is not a neurological condition. Individuals who have experienced this phenomenon think their success is coincidental or results from whom they know rather than their intellect or skills. The IP convinces individuals that their success is primarily attributable to tricking others into believing they are worthy. These individuals perceive themselves as impostors, pretending to be talented and capable; they often fear that others may realise their inability (Clance & Imes, 1978).

Nervousness (Topping, 1983), low self-esteem (Sonnak & Towell, 2001), despair (McGregor *et al.*, 2008), and low value (Roskowski, 2010) are all common emotions experienced by individuals

who experience IP. Professionals see themselves as less able than their peers and are challenged to adopt success; they continuously doubt their intelligence and ability (Leary, Patton Orlando & Funk, 2000).

1.2 BACKGROUND AND PROBLEM STATEMENT

*“Mirror, mirror on the wall,
am I worthy of this all?”*
- Anon -

The Imposter Phenomenon (IP) can negatively affect an individual's work-life (Caselman *et al.*, 2006). For example, while the emotions associated with this phenomenon may inspire a specific individual to work harder, they may also encourage self-defeating behaviours such as discouragement or effortlessness (Parkman, 2016). Furthermore, there is evidence that these emotions may impair an individual's ability to achieve their full potential for success. Additionally, this phenomenon affects individuals, ranging from students who feel they made a mistake by enrolling in a programme to CEOs who believe they could be fired during each board meeting (Lane, 2015).

The IP leads to psychological anxiety, heightened self-monitoring, self-doubt, and recurring feelings of failure. It harms careers, as individuals are overly concerned about demonstrating their capability (Lane, 2015). This will result in burnout and ineffectiveness. Individuals often pass up chances due to inadequacy or incapacity, not considering their competence. A person prioritising job satisfaction over family time can negatively affect relationships. They devote an inordinate amount of time attempting to establish themselves professionally, to the detriment of their personal lives (Lane, 2015).

It has been established that fear of failure may positively and negatively affect organisations and individuals (Mount & Tardanico, 2014). Fear of failure strongly impacts persons who experience the IP. Leaders confronted with the IP may submit to fear and despair, preventing them from making critical decisions that determine their organisation's or groups' success or failure. Individually, leaders who fear making errors avoid taking appropriate steps toward individual and professional development and career success; they often avoid introducing innovative ideas (Cacciotti *et al.*, 2016b).

Several investigations have been conducted to determine the nature of the anxiety created by this fear of failure and how individuals in different occupations and circumstances manage it. For example, numerous studies investigated how leaders of organisations deal with their feelings of

failure while launching a new firm or project or when adopting novel ideas (Sosna *et al.*, 2010). Researchers have found additional IP characteristics and personal failure anxiety at the organisational level. For instance, leaders who fear failure may withhold essential adaptations to propel the business forward. This absence of progress may also decrease organisational effectiveness, leading to failure (De Souza & Tomei, 2016).

Despite the apparent difficulties associated with the fear of failure, some individuals within organisations may value having a leader who suffers from this kind of apprehension caused by the IP (Morgan & Sisak, 2016). These leaders are careful and cautious, basing their decision-making on factual evidence to avoid making mistakes that would expose any shortcomings in their ability to fulfil their responsibilities (de Souza & Tomei, 2016). For example, they believe that attention to facts will result in the achievement of healthier, higher-quality work outcomes.

Making judgements and being innovative in the workplace are essential components of becoming a great leader; these abilities are critical for boosting an individual's capacity to take chances and grow throughout their careers and may also be necessary for corporate success (Dixon *et al.*, 2010). Fear of failure may also directly affect both individual growth and organisational performance. Leaders may be motivated, and an employee who confesses to fearing failure may be highly driven to excel in their careers and organisations (Cacciotti *et al.*, 2016b).

By demonstrating a link between characteristics that manifest the IP, such as fear of failure, poor self-efficacy and claimed deception and leadership competencies, research suggests that the influence of the IP may damage these leadership behaviours in the workplace. The relationship between the IP and innovative work behaviour is not fully understood. However, some research suggests that individuals who experience the IP may be more likely to engage in innovative work behaviour to compensate for their self-doubt and insecurity (Jackson, 2018; Vergauwe *et al.*, 2015). Research also suggests that the IP can negatively affect decision-making by causing individuals to doubt their abilities and be overly critical of themselves. This can lead to hesitation, indecision, and reluctance to take risks (Jackson, 2018; Vergauwe *et al.*, 2015).

Aparna and Menon (2020) postulated that evidence linking the impostor phenomenon with leadership competencies is insufficient. However, their study hypothesises connections between impostor phenomenon and critical leadership behaviours such as decision-making and innovative work behaviour. The gap is that this hypothesis still needs to be tested, and this study filled the void by testing this hypothesis. ***Therefore, the problem that was investigated is that IP negatively influences critical leadership competencies such as decision-making self-***

efficacy and innovative work behaviour, and self-esteem mediates the relationship. Using a quantitative cross-sectional survey, this study measures the influence of the IP on innovative work behaviour (IWB) and decision-making self-efficacy and the mediator role of self-esteem. In this context, self-esteem acts as a psychological buffer that mediates the influences of the imposter phenomenon on leadership competencies.

1.3 OBJECTIVES OF THE STUDY

This research investigated the influence of the IP on leadership competencies, namely, decision-making self-efficacy and IWB. The study also highlighted the role of self-esteem as a mediating variable in the relationship between the IP (independent variable) and leadership competencies, namely decision-making self-efficacy and IWB (dependent variables).

The objectives are to establish the following:

- To investigate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour levels of managers.
- To evaluate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour measuring instruments' validity and reliability in the South African context.
- To determine the differences in the mean scores of the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.
- To determine whether self-esteem mediates the relationship between the impostor phenomenon, decision-making self-efficacy and innovative work behaviour.
- To determine if there is a relationship between the impostor phenomenon, self-decision-making efficacy and innovative work behaviour of managers in South Africa.

The objectives outlined align with both methodological and theoretical aspects:

- *Investigation of Variables (Theoretical):* The objective to investigate the levels of the impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour among managers is primarily theoretical. This objective aims to understand the relationships between these variables and their potential impact on critical leadership

competencies. It contributes to building the theoretical foundation of the study by exploring the concepts and their interconnections.

- *Validity and Reliability Assessment (Methodological)*: The objective to evaluate the validity and reliability of measuring instruments for the mentioned variables in the South African context is methodological in nature. This step involves assessing the tools used to measure the constructs, ensuring that they are appropriate, accurate, and consistent within the specific cultural and contextual setting. This objective focuses on the methodology used to collect accurate data, which supports the overall reliability of the study's findings.
- *Comparison of Mean Scores (Methodological and Theoretical)*: The objective to determine differences in mean scores of the variables across demographic factors such as age, qualification, experience, role, gender, and sectors is both methodological and theoretical. While the methodology involves statistical analysis, the theoretical significance lies in understanding how these demographic factors might influence the impostor phenomenon and its related constructs, thereby contributing to the broader theoretical understanding of leadership competencies.
- *Mediation Analysis (Theoretical)*: The objective to investigate whether self-esteem mediates the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour is theoretical. This objective delves into the underlying mechanisms that could explain the relationships between variables. It contributes to the theoretical framework by exploring the potential role of self-esteem as a mediator in shaping leadership competencies affected by the impostor phenomenon.
- *Relationship Exploration (Theoretical)*: The objective to determine if there is a relationship between the impostor phenomenon, self-decision-making efficacy, and innovative work behaviour of managers in South Africa is theoretical. This objective focuses on exploring associations between variables to deepen the theoretical understanding of how the impostor phenomenon might impact decision-making and innovation within leadership roles.

Overall, these objectives combine both methodological and theoretical components to comprehensively investigate the influence of the impostor phenomenon on critical leadership competencies. The methodological aspects involve data collection and analysis techniques, while the theoretical aspects contribute to building a nuanced understanding of the relationships among variables within the broader context of leadership.

1.4 RESEARCH QUESTIONS AND HYPOTHESES

Considering the research problem, the following research questions were formulated:

- What is the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour levels of managers?
- Are the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour measuring instruments reliable and valid in South Africa?
- Are there differences in the mean scores of the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors?
- Does self-esteem mediate the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour?
- Is there a relationship between the impostor phenomenon, decision-making efficacy and innovative work behaviour of managers/leaders in South Africa?

The research hypotheses were as follows:

- H1₀: The impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour measuring instruments will not be valid and reliable in South Africa.
- H1_a: The impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour measuring instruments are valid and reliable in South Africa.
- H2₀: No differences exist in the impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.
- H2_a: There are differences in the impostor phenomenon of self-esteem, decision-making self-efficacy, and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.
- H3₀: Self-esteem will not mediate the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour.
- H3_a: Self-esteem will mediate the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour.
- H4₀: The impostor phenomenon will not negatively influence the leadership competencies, namely, decision-making self-efficacy and innovative work behaviour.

H4_a: The impostor phenomenon will negatively influence decision-making self-efficacy and innovative work behaviour.

The research questions outlined are well-aligned with the research title and problem statement. Each question addresses a key aspect of the research problem and contributes to the overall goal of understanding how the imposter phenomenon affects critical leadership competencies:

"What is the impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour levels of managers?" - this question directly aligns with the research title by addressing the initial step in understanding the influence of the imposter phenomenon on critical leadership competencies. Exploring the levels of the imposter phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour among managers helps to establish a foundation for investigating how these factors interact and potentially impact leadership competencies.

"Are the impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour measuring instruments reliable and valid in South Africa?" - This question is integral to the research problem of developing a framework. To assess the influence of the imposter phenomenon on critical leadership competencies, it is essential to ensure that the measuring instruments used to capture these constructs are reliable and valid in the South African context. Without valid and reliable instruments, the framework's findings could be compromised.

"Are there differences in the mean scores of the impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender, and sectors?" - This question aligns with the research title by delving into the nuances of the imposter phenomenon's impact on leadership competencies. By exploring potential differences in the mean scores across various demographic factors, the study aims to uncover potential variations in how the imposter phenomenon affects different groups of managers.

"Does self-esteem mediate the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour?" - This question is directly aligned with the research problem as it investigates the potential mechanisms through which the imposter phenomenon influences critical leadership competencies. By examining whether self-esteem acts as a mediator, the study aims to provide a deeper understanding of how these variables interact, which is central to the research focus of assessing the influence of the imposter phenomenon.

"Is there a relationship between the impostor phenomenon, decision-making efficacy, and innovative work behaviour of managers/leaders in South Africa?" -This question aligns perfectly with the research problem of understanding how the impostor phenomenon impacts critical leadership competencies. By exploring the relationships between the impostor phenomenon, decision-making efficacy, and innovative work behaviour, the study seeks to uncover direct associations that contribute to the overall framework's development.

In summary, each research question directly addresses various aspects of the research title and problem, collectively forming a comprehensive approach to understanding the influence of the impostor phenomenon on critical leadership competencies and contributing to the development of an effective assessment framework.

1.5 CONCEPTUAL MODEL OF THIS STUDY

The main constructs of this study are the impostor phenomenon, managerial decision-making self-efficacy, and innovative work behaviour. In the context of this study, the conceptual model serves as an abstract, elevated representation elucidating the intricate interplay and associations among pivotal concepts, variables, and notions integral to the research inquiry.

The title inherently signifies the objective of structuring a coherent blueprint or schematic delineation that systematically guides the systematic investigation of the ramifications induced by the impostor phenomenon on essential leadership competencies. This conceptual model which supports this research framework, as envisioned, comprises interconnected constituents, which encompass the subsequent facets:

Elements Constituting the Impostor Phenomenon: This conceptual model discerns and explicates the fundamental constituents composing the impostor phenomenon, encapsulating the cognitive, emotional, and behavioural aspects intrinsic to it. This encompasses an understanding of its psychological foundations, underlying causative factors, overt manifestations, and the accompanying emotional responses. This is addressed in Chapter 3, the literature review of this study.

Critical Tenets of Leadership Competencies: This conceptual model outlines with precision the distinct leadership proficiencies and attributes deemed indispensable for the effective execution of leadership roles. This span encompasses domains such as practised communication, thoughtful decision-making, emotional intelligence, and adaptable responsiveness to evolving contexts. This is addressed in Chapter 3, the literature review of this study.

Pathways of Influence and Interaction: This framework visually articulates the conceivable avenues through which the imposter phenomenon may exert its influence on, or interact with, the foundation of critical leadership competencies. This domain is enriched by the exploration of dynamics such as the intersection of self-doubt with decision-making processes, the infusion of feelings of inadequacy into communication modalities, and the impact of the fear of exposure on strategic cogitation.

Strategies of Measurement and Evaluation: This study provides a structured framework elucidating strategies suitable to the development of precise measurement tools and assessment methodologies. Such tools are instrumental in quantifying the imposter phenomenon's sway on leadership competencies, encompassing methodologies in the method of a questionnaire. The development of the questionnaire is discussed in section 4.5, Measuring tools of this study.

Contextual Determinants: This framework accommodates the incisive consideration of contextual determinants that may act as mediators or moderators within the intricate tapestry of the imposter phenomenon's relationship with leadership competencies. These contextual determinants incorporate variables such as organisational culture, prevailing leadership styles, personal experiential histories, and extrinsic pressures exerted by the external milieu. This is discussed in Chapter 3, the literature review of this study.

Analytical Framework for Inference: This study offers a structured analytical framework that underpins the discernment and interpretation of amassed data, thereby facilitating the derivation of cogent insights pertaining to the multifaceted influence of the imposter phenomenon on critical leadership competencies.

In synthesis, the crux of this title suggests the inception of a holistic conceptual model that delineates the intricate nexus between the imposter phenomenon and critical leadership competencies. Through this illustrative model, an organised and systematic approach emerges, furnishing both researchers and practitioners with a comprehensive theoretical groundwork to measure and address the intricate psychological dynamics prevalent within the ambit of leadership contexts.

Based on the main constructs identified within this study, Figure 1.1 represents a visual overview of this study. This diagram shows the correlation between the IP and leadership competencies. The scope of this study is indicated at the centre of Figure 1.1:

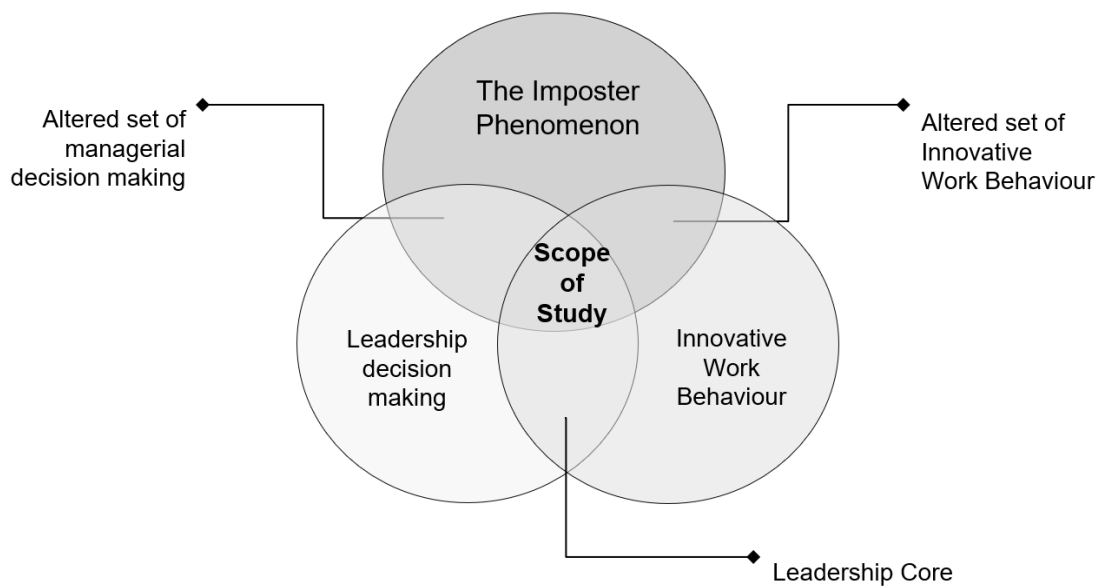


Figure 1.1: Visual Construct: Relations between IP, the Leadership Competencies of Innovative Work Behaviour and Decision-Making

Source: (Researcher's own)

Figure 1.2 represents the main areas of this study and the main concepts which influence each area. This image forms the core of the visual construct within this study namely the influence of the IP. This construct fits characteristics correlated with the IP to ascertain its impact on leaders within the scope of decision-making and IWB while determining the mediating role of self-esteem and self-efficacy. It also describes the overlapping areas of these central concepts, representing the altered behaviour of leaders.

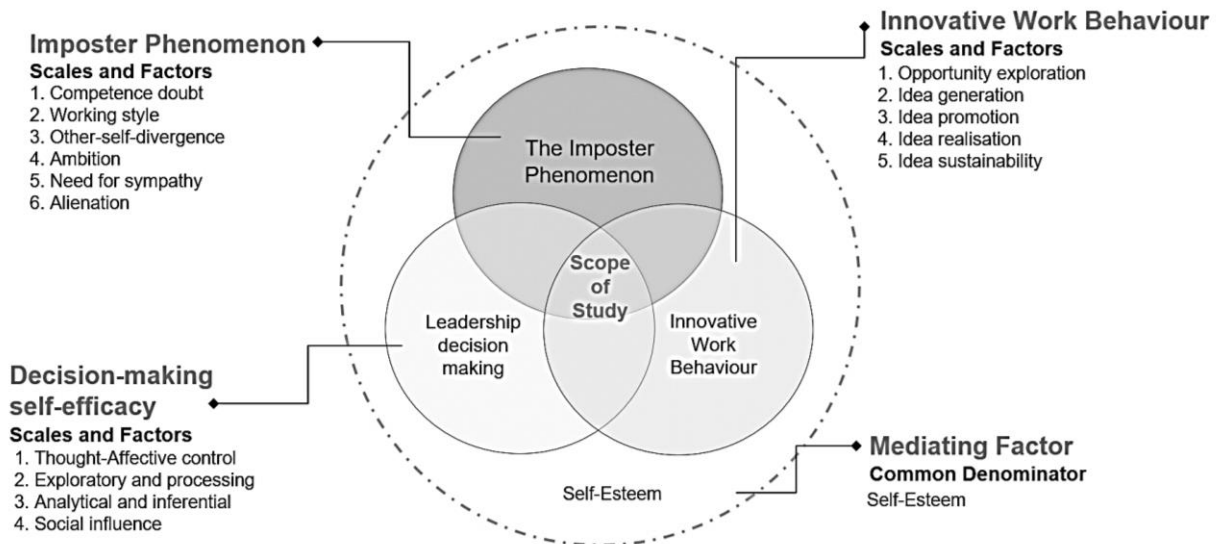


Figure 1.2: Description of Visual Construct: Relations between IP, Leadership Decision-Making and IWB and Each Area's Main Concepts Source

(Researcher's own)

Figure 1.3 presents an overview of this study in its totality. The core of the illustration presents the conceptual model, which is supported by the literature review of this study. The theoretical framework introduces and describes theories that account for the existence of the research problem. The literature review provides an examination of scholarly sources on this subject. It summarises current knowledge and enables the possibility to identify pertinent theories, methods and gaps in the existing research related to this study. The conceptual model is discussed in detail in Chapter 2 of this study. Chapter 3 presents the literature review related to this study.

The instruments used in this study collect, quantify and analyse the data collected. The third circle represents the instruments to support and determine the outcomes of this study. These instruments used in this study are discussed in Chapter 4. The fourth circle represents the model containing the main concepts of this study.

Operational definitions and essential ideas were identified to convert abstract notions into observable and quantifiable metrics to collect data. The fundamental concepts of this study are central to the field of study and assist the researcher in defining and comprehending the central topic of this study.

The outer circle represents the mediator of this study, namely self-esteem. A mediator is a term that refers to how an independent variable affects a dependent variable. It is a component of an effect's causal pathway and explains its occurrence. The independent variable causes a mediator. In this study, self-esteem is the mediator of all the main concepts of this study. Self-esteem is supported by self-efficacy within this study. This central theme and its relation to other primary constructs are discussed throughout its chapters.

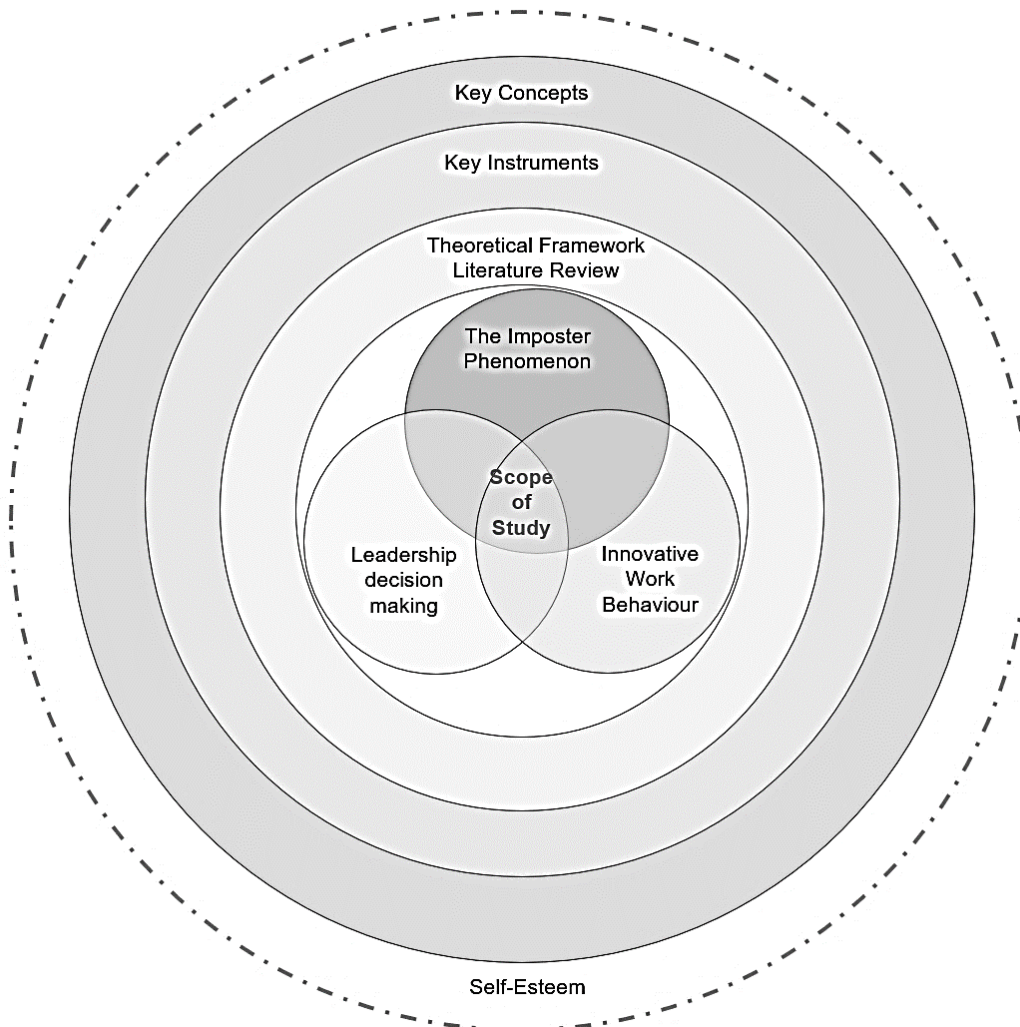


Figure 1.3: Framework of this Study

Source: (Researcher's own)

In Figure 1.4, the aims and objectives of this study are presented. These aims and goals relate to key themes: the level and differences of the influence of the IP; the reliability of the instruments measuring the impact of the IP; whether self-esteem (and self-efficacy) is the mediator between

the constructs, and if there is a relationship between these constructs. This illustration shows the four key themes (as presented in Section 1.3, Aims and Objectives of this study) and their relationship.

This study aimed to determine the impact level of the imposter phenomenon on the two leadership competencies, self-esteem decision-making efficacy and IWB levels of managers/leaders. Theme 1, Levels, forms the inner core of the study.

Theme 2, Reliability, is addressed in the second layer of this visual presentation, which contains the instruments used to assess the constructs within this study. This study aims to determine the validity and reliability of the measuring instruments evaluating the impact of the IP, self-esteem, leadership competencies, decision-making efficacy and innovative work behaviour.

Theme 3, Mediator. The last layer represents the mediator of this study, namely self-esteem. This theme refers to how the independent variable (self-esteem) influences the dependent variables (primary research constructs). This study determines if self-esteem mediates the relationship between the IP and leadership competencies, namely decision-making efficacy and innovative work behaviour.

Theme 4, Relationship: This study aims to determine if there is a relationship between the IP, decision-making self-efficacy and IWB of managers/leaders in South Africa. This theme is represented as the relationship between the core and all the outer levels of the framework.

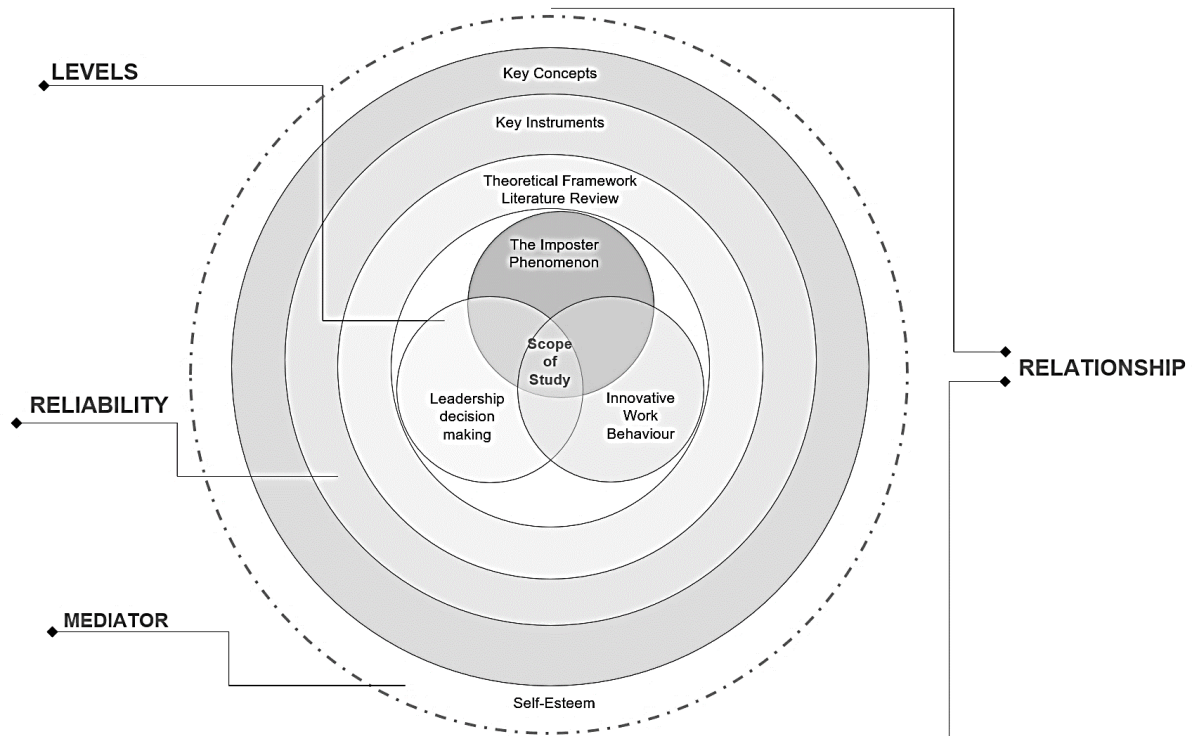


Figure 1.4: Relationship Representation: Aims and Objectives within the Research Construct

In the section above, the visual presentation of this study was presented, and the significance of each layer was explained. In the next section, the preliminary literature review is presented.

1.6 PRELIMINARY LITERATURE REVIEW

The IP and its influence on leadership competencies are the central themes of this literature study. This study also reviews the role of self-esteem as a mediating factor in the relationship between the IP and leadership competencies, namely decision-making self-efficacy and IWB which are the dependent variables. The IP is the independent variable. Figure 1.5 shows the conceptual framework for the investigation.

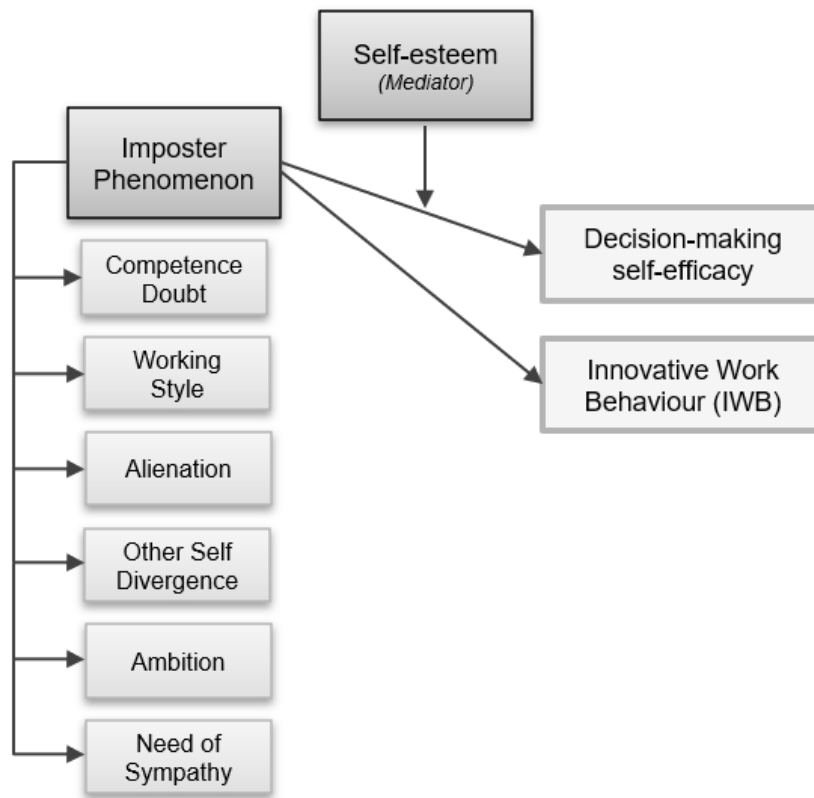


Figure 1.5: Conceptual Framework of this Study

Source: (Researcher's own)

The following sections discuss the primary constructs and the link between the IP, self-esteem, decision-making self-efficacy and IWB.

1.6.1 Impostor phenomenon

Is the IP the invisible plague of leadership and a cause of vulnerability in today's shifting job environments and the global economy? The IP is a psychological condition in which a person has persistent concerns about their abilities, talents or accomplishments and fears being exposed as a fraud. In the corporate community, leaders in management roles embody the governing class. These leaders characterise organisations through their academic expertise and willingness to sell a vision of success (Kennedy, 2019). They are expected to be outstanding performers and infallible front-runners with the highest possibility of victory, even though they do not always have the right solution (Wiig, 1997).

According to the World Economic Forum's Competitiveness statement, the United States ranks first in efficiency (Schwab, 2019). Their business leaders, universities, research agencies, start-

ups and the leaders who assist them in leading high-performance teams enabled this degree of success. However, these leaders' high-pressure roles and obligations may cause them to become maladapted perfectionists constantly concerned with their success. They may, therefore, become particularly vulnerable to the mental issues, doubt and anxiety associated with the IP (Schwab, 2019).

The workplace demands of the twenty-first century are overwhelming (Noe *et al.*, 2014). Employment is no longer simply a set of tasks. Work growth and stability have become increasingly existential, and digital transition plays a vital role in any profession's unknown future, as human labour is being replaced by robotics and artificial intelligence (Annunziata & Bourgeois, 2018). These complexities may be detrimental to leaders as the global rivalry becomes increasingly intense. They are expected to work harder, for longer hours and produce more innovative work processes. Leaders may fall short of their potential and abilities more technical demands and aspirations placed on them (Macky & Boxall, 2008).

Consultant Roger Jones examines the consequences of the IP inside leadership ranks in his 2015 Harvard Business Review report titled "What CEOs are afraid of?" (Jones, 2015). Jones's report is based on a 2014 study of 116 CEOs and senior executives. His concluding remarks are simultaneously enlightening and surprising. Leaders are not as formidable as we once believed. Top leaders fear underachievement, being frail or vulnerable, becoming a target of internal politics, and seeming foolish or out of sync with others (Jones, 2015). These findings of the survey are stereotypical IP characteristics. Insecurity about one's status, a constant sense of weakness and imperfection and excessive self-consciousness may all contribute to the protective behaviours of leaders. Consequently, these IP characteristics may have a cascading effect on an organisation.

Leaders who are fearful of their abilities cannot confront obstacles or implement improvements in the organisation. When fear and self-preservation enter business decision-making, organisational risks, process deficiencies, and undesirable practices may ensue (Walker, 2002). Concerns about work loss, competitive advantage and professional recognition will exacerbate the situation and cause an unnecessarily authoritarian defensiveness. Workplace pressures may reinforce perfectionistic reactions (Bahadori *et al.*, 2018).

Analysing these findings from previous research shows a connection between the IP and dysfunctional occupational behaviours. When such behaviours spread across an organisation and multiply, there are adverse effects. The influence may be both harassing and discriminating.

As a result, the IP has perceived degrees of awareness that may significantly impact leaders. To counter the impact of the imposter phenomenon on their self-esteem, leaders should acknowledge, analyse, and effectively manage the influence of key leadership skills, specifically decision-making self-efficacy and innovative work behaviour (IWB).

Self-esteem is a phrase that describes how individuals feel about themselves and how they maintain those feelings. It encompasses feelings of value, capability, significance, effectiveness and acceptance or rejection. Self-esteem is a more effective form of the self that includes cognitive, behavioural, evaluative, and emotional traits; it is a component of the self-evaluative notion (Coetzee *et al.*, 2006; Garrety *et al.*, 2003; Leary, 1999a, 1999b). Self-esteem is a mediator between the dimensions under investigation in this study and is examined further in the next section.

1.6.2 Self-esteem

According to researchers, self-esteem is a socially defined emotion that refers to thoughts, feelings, and experiences about a person's various self-concepts and self-images that are motivated by the mental need for connection and acceptance within a social group as well as the eagerness for effective and consistent functioning, knowledge, and achievement in comparison to other group members (Battle, 1992; Baumeister & Leary, 1995; Coetzee *et al.*, 2006). Individuals with high self-esteem feel good about themselves regardless of their skills, talents and other attributes. In contrast, individuals with low self-esteem feel terrible about themselves even if they are competent (Chen *et al.*, 2004; Park *et al.*, 2018).

Individual self-esteem refers to a person's most profound beliefs and emotions regarding self-worth. This area of self-esteem most impacts an impostor's esteem (Battle, 1992). Although empirical research on the IP's relationship to self-esteem has produced varied results, self-esteem problems are at the heart of the IP (Harvey, 1981; Schubert & Bowker, 2019; Topping, 1983).

Impostorism will negatively impact self-esteem, contributing to self-esteem insecurity (Schubert & Bowker, 2019). According to some researchers, there is a tenuous connection between the IP and self-esteem, showing that persons with low self-esteem are disproportionately impacted, with those with solid self-esteem making up a small minority. Poor self-esteem is crucial for impostorism, according to Neureiter and Traut-Mattausch (2016), because it is linked to higher levels of impostor emotion (Cokley *et al.*, 2018). Although the processes behind this connection

are poorly understood, the IP has been linked to perfectionism. Self-esteem mediates the connection between perfectionism and the experiences of the IP. Standards negatively impacted the impostor's emotions via the self-esteem mechanism, but the gap, directly and indirectly, affected the impostor's feelings (Cokley *et al.*, 2018).

Leadership and the IP are both heavily influenced by self-esteem. Self-esteem emerges as a predictive factor strongly intertwined with both leadership and the imposter phenomenon. Elevated self-esteem tends to propel individuals into leadership roles, fostering confidence in decision-making, and facilitating effective team guidance. Conversely, the imposter phenomenon, driven by low self-esteem, can hinder leadership potential by infusing doubt into one's abilities and accomplishments. As a dual-edged trait, self-esteem significantly influences the trajectory of leadership development while simultaneously shaping an individual's susceptibility to the imposter phenomenon's self-doubt and insecurities.

According to Landford and Clance, Impostors lack a supportive environment to develop confident self-worth. They, therefore, want to become an idealised version of themselves (Langford & Clance, 1993). Healthy self-esteem is defined by positive value beliefs that fluctuate in response to changing circumstances and do not require ongoing reassurance and defence (Schubert & Bowker, 2019). Consequently, those with solid self-esteem are less susceptible to self-esteem-related problems and do not need to justify their worth.

Self-preservation and self-improvement drive the behaviour of impostors. Unlike those who display impostor symptoms, individuals with consistent self-esteem often appreciate and embrace themselves unconditionally. Impostors, in particular, strive for high levels of individual accomplishment, originating from a need to justify illusions of intellectual giftedness (Langford & Clance, 1993). As a result, impostors avoid circumstances that may result in unfavourable feedback regarding their competency (Dudău, 2014; Ross & Krukowski, 2003).

Impostors rely on perfectionistic work practices to prevent making mistakes, as these practices protect their self-esteem (Schubert & Bowker, 2019). When confronted with success, impostors have a proclivity toward self-handicapping. When they fail, they get tactical justifications. Their sense of competence improves when they succeed, but only for a limited period (Want & Kleitman, 2006). Talents and perceived self-efficacy of individuals impact impostors. The competence efficacy-based self-esteem element focuses on how individuals see their skills and value them (Gecas & Schwalbe, 1983; Owens, 1994; Rosenberg *et al.*, 1995). According to

research, the IP is impacted by self-esteem issues, which are more common in individuals with poor self-esteem (Schubert & Bowker, 2019).

A decreased sense of self-worth has been connected to the Impostor Phenomenon (Chrisman *et al.*, 1995; Schubert & Bowker, 2019; Sonnak & Towell, 2001). Several research studies have revealed that perfectionism and self-esteem are linked (Blankstein *et al.*, 2008). Perfectionism enforced by others has been connected to low self-esteem. However, perfectionism imposed by oneself has been linked to good self-esteem (Hewitt & Flett, 1990). Perfectionism is defined by high personal standards, organisation, orderliness, and a drive to achieve perfection. Excessive or excessively high individual standards, often maladaptive perfectionism, are commonly referenced in perfectionism definitions. While an internal sense of intellectual phoniness drives perfectionists and impostors, perfectionists are motivated by an external perception of intellectual phoniness. Impostors are primarily motivated by an inner feeling of intellectual phoniness (Cokley *et al.*, 2018).

According to Neureiter and Traut-Mattausch, low self-esteem enhances impostor feelings (Cokley *et al.*, 2018; Neureiter & Traut-Mattausch, 2016). According to Slade and Owens' dual-process model of perfectionism, healthy and pathological perfectionists display similar behaviours for different reasons (Slade & Owens, 1998). Positive reinforcement and a desire to achieve motivate adaptive perfectionists, leading to improved self-esteem. Fear of rejection and a desire to avoid embarrassment drive, maladaptive perfectionists, resulting in poor self-esteem (Cokley *et al.*, 2018). Self-esteem reliably mediated perfectionism-related interactions (Deuling & Burns, 2017). Perfectionists hold themselves to a high standard, are exceedingly critical of their achievements, and strive for perfect performance (Stoeber & Otto, 2006). Worry and sadness are connected to this pathological perfectionism (Black & Reynolds, 2013).

Agreeing with Hamachek, perfectionism is a multifaceted phrase with positive and negative aspects. He distinguished between neuroticism and regular perfectionism (Hamachek, 1978). It is indicated that ordinary perfectionists strive for greatness without jeopardising their mental health. In contrast, neurotic perfectionists establish practically unachievable objectives with minimal context-specific flexibility, resulting in perpetual agony as they fail to fulfil their high standards (Cokley *et al.*, 2018).

Organisational self-esteem refers to employees' perceptions of their value and merit as team members and their self-perceived contributions to the company. Individuals who strive for self-improvement and want to sustain feelings of personal satisfaction, worth and effectiveness are

more likely to act on their self-evaluation than those with low self-esteem, who are more vulnerable to various cues like unfair internal treatment, particularly in the organisational context (Gardner *et al.*, 2004).

Organisational self-esteem and innovative work practices have a good relationship (Askaripoor *et al.*, 2014; Ojedokun, 2012). Employees with greater organisational self-esteem than those with lower levels may exhibit more IWBs (Rank *et al.*, 2009). Individuals with high organisational self-esteem may settle disputes and reinforce their self-esteem as valuable corporate members by engaging in IWBs in an environment marked by enlarged role definitions and unexpected job-related challenges (Ojedokun, 2012). Cognitive dissonance results from this engagement in maintaining consistency between self-evaluation and actual job behaviour (Ojedokun, 2012). Because dissonance is unpleasant, individuals will strive to resolve it by acting incongruently to maintain consonance. De Jong defines innovative employees as going above and beyond their professional responsibilities to be innovative (De Jong, 2006). Additionally, there is a connection between out-of-role behaviour and organisational self-esteem (Van Dyne *et al.*, 2000). As a result, extra-role conduct is a form of IWB.

Self-esteem has a favourable effect on a person's leadership capacity. Neither leadership effectiveness nor positivity predicted non-leadership performance metrics or a measure of general self-esteem independently predicted leadership performance ratings (Chemers *et al.*, 2000). Scholars have discovered that genetic and developmental factors influence individuals' advancement to leadership positions. The research extensively establishes the importance of developmental experiences, feedback, and individual diversity in leader development (Li *et al.*, 2011).

Despite their strong relationship, self-esteem and self-efficacy are separate concepts (Lent & Fouad, 2011). Self-esteem is a vital component of life that affects many things, including performance and employment. Self-esteem is an excellent predictor of professional decision-making self-efficacy (Betz *et al.*, 1996). Self-efficacy is the belief that one's efforts will lead to success. Greater self-efficacy is linked to higher levels of self-worth than lesser ones (Bandura, 1989).

Self-efficacy, the conviction that one can overcome obstacles differs from self-esteem, which is a person's overall evaluation of themselves and their value in various situations. Studies show that self-esteem favourably correlates with many leadership characteristics (Gist & Mitchell, 1992). A leader's self-esteem correlates with their capacity to accept individuals for who they are, remain

present, be polite to close colleagues, trust others and work without constant praise and adulation. These traits will likely boost their motivation, independence, close working relationships, and self-acceptance (Bass & Bass, 2009). Individuals with a high feeling of self-worth seek feedback more frequently than those without, leading to leadership development. It has been shown that self-esteem influences whether someone accepts a leadership position. Additionally, self-esteem influences leadership growth and progress (Atwater & Waldman, 1998).

Self-respect affects impostors and leaders; those who value themselves highly can handle pressure and severe criticism better. As a result, individuals are more motivated to lead and achieve high-performance levels over time to improve their self-esteem (Grant & Shandell, 2021). Conversely, those who lack self-confidence are more prone to react because they fear making errors and will lower their standards the following time, missing out on opportunities to grow (Tramèr *et al.*, 2020). The next section will discuss decision-making and its role in leadership skills.

1.6.3 Decision-Making Self-Efficacy

Leadership is about making decisions and being part of the organisation's activities and outcomes (Dean & Sharfman, 1996). Because the effectiveness of business operations is primarily influenced by how decisions are formed and implemented, the study of decision-making within an organisational context is becoming increasingly significant. The decision-maker is a constant and ever-present component when we study the nature of decision-making. Leaders who often fill this role of decision-maker are constantly faced with assessing choices and making decisions about various challenges. Accordingly, good leadership abilities are essential to the decision-making process (Omarli, 2017)

Making decisions is a crucial managerial function that exclusively depends on individuals. This process should focus on all actions to guarantee that the proper decisions are made or if one has already been made, executed and monitored. As a result, leaders must constantly evaluate options and make broad decisions (Rus *et al.*, 2019). As leadership decisions play a part in achieving the organisation's business goals and achievements, decision-making is increasingly important (Igbaekemen, 2014). When analysing the structure of the decision-making process, the choice variable is a constant and ever-present element. The fact that information gathering and assessment procedures are appropriately established is worthless for an unrecognised problem or an uncovered information demand. The influence of the IP on the choice factor within the

decision-making process is vital, as this will determine how a leader decides. Leadership choice is strongly influenced by a leader's personality and other relevant variables affected by the IP.

According to cognitive scientists, decision-making, like the influence of the IP, is neither wholly logical nor entirely intuitive. It is a complex cognitive process that relies on dynamic relationships and intellectual, emotional and spiritual knowledge (Bratianu *et al.*, 2018). The foundation of the most well-known decision-making theories is that a logical decision results in specific behaviour. Since decision-making models for leaders combine a limited rationality approach and probabilistic reasoning, they do not consider all available information and knowledge (Bratianu *et al.*, 2018).

Decision-making involves rational and non-rational elements that demand strategic thinking to solve a present issue. The dominating variable in the deliberative system is rationality, and thought is methodical, slow and careful. The emotional variables are the most important in the intuitive approach and are influenced by our direct experience with the actual world (Hallen & Pahnke, 2016; O'Brien, 2012). This is also surprisingly like the IP's influence, as it only manifests in certain circumstances and emotions experienced. Making decisions under challenging situations necessitates careful and actionable strategic thinking (Yagnik & Chandra, 2019).

The foundation of the most well-known decision-making theories is that a logical decision results in a specific behaviour. Because decision-making models for leaders combine a limited rationality approach and probabilistic reasoning, they do not consider all available information and knowledge (Javed, Abdullah, *et al.*, 2019). Leaders encourage employees to make decisions, fostering an inclusive culture (Boekhorst, 2015). Therefore, employees have a say in decisions and dialogues are noticed, promoted and put into innovative action ideas.

The IP is a psychological idea that needs theoretical support in the context of professional growth. Effective decision-making is intricately linked to career adaptability as it involves assessing options, weighing potential outcomes, and making choices that align with an individual's evolving career goals and circumstances. A strong capacity for decision-making enhances one's ability to navigate career transitions, seize new opportunities, and proactively adjust their career path in response to changing environments.

The Impostor Phenomenon also influences decision-making self-efficacy (Neureiter & Traut-Mattausch, 2017). The preparedness for career adaptability, resources for career adaptability and reactions to career adaptability—including career planning, difficult decision-making situations, career exploration and occupational self-efficacy—were all studied for the IP (Neureiter & Traut-

Mattausch, 2017). The preparedness for career adaptability, resources for career adaptability and reactions to career adaptability—including career planning, difficult decision-making situations, career exploration and occupational self-efficacy—were all studied for the IP (Neureiter & Traut-Mattausch, 2017). The position of self-efficacy in decision-making is considered in the next section.

Two researchers hypothesised that self-efficacy might overcome resistance due to the importance of self-efficacy expectations for initiating and maintaining performance. For instance, reluctance was initially used in a study of women's professional advancement (Hackett & Betz, 1981). According to the findings, women lack self-efficacy in various behaviours relevant to their jobs, particularly in environments where males predominate. As a result, they are unable to reach their full professional potential. Betz and Hackett used the term "occupational self-efficacy" to test the hypothesis by describing how self-efficacy influences women's career-related behaviours and decisions by anticipating their occupational possibilities. In male-dominated professions, men had greater self-efficacy levels. In contrast, in female-dominated occupations, women had higher self-efficacy levels (Hackett & Betz, 1981).

When paired with gender and vocational interest judgements, occupational self-efficacy was a potent predictor of the range of career alternatives but not competence. This study corroborates the results of Elton and Rose's male study, which found no personality or competence differences between indecisive and motivated students, indicating that students choose jobs that match their inclinations (Elton & Rose, 1971). Even though gender inequalities in self-efficacy are a good predictor of gender inequalities in specific career paths, Betz and Hackett observed no overall gender differences in self-efficacy; instead, gender discrepancies in traditional and non-traditional employment surfaced (Hackett & Betz, 1981)

The concept of career decision-making self-efficacy was developed and operationalised using the "Career Decision-Making Self-Efficacy (CDMSE)" scale. Although the general self-efficacy factor for making career decisions was high, the five task-specific sub-scales did not individually contribute. Individuals who are more confident in their ability to handle career decision-making tasks report less career indecision. The relationship between ability level and self-efficacy expectations was either negligible or non-existent. This result contradicts Bandura's assertion that task-specific self-efficacy exists (Taylor & Betz, 1983).

Taylor and Popma investigated the relationship between CDMSE and occupational ambiguity using the variables professional salience and locus of control (Taylor & Popma, 1990). This study

aimed to replicate the original study and see if the CDMSE could be used to assess professional decision-making self-efficacy (Taylor & Betz, 1983). Multiple regression studies show that only career decision self-efficacy strongly predicts occupational reluctance. Five independent factors explained the variation in occupational hesitancy to a third of the variance. Career prospects, the importance of a career, and locus of control all impact occupational self-efficacy and decision-making capability (Peterson, 1993). The Career Decision Scale was developed to measure resistance at work (CDS). After developing a scale of vocational indecision, the CDS was developed as a criterion for assessing the impact of vocational interventions on hesitant students (Osipow *et al.*, 1976).

Higher education and perseverance correlate with professional self-efficacy (Lent *et al.*, 1989). Studies have shown a link between persistence and professional self-efficacy. The findings relate to tenacity and professional determination (Peterson, 1993). The Career Decision Scale, the Self-Esteem Scale and the Interest Inventory have a weak relationship with self-efficacy. The Career Decision Scale, the Self-Esteem Scale and the Interest Inventory have a weak relationship with self-efficacy. As a result, construct and discriminant validity exist for self-efficacy in making professional judgements. Self-efficacy in making professional decisions is separate from career indecision, considerable determination, and self-esteem (Peterson, 1993).

Management is about making decisions and being part of the organisation's activities and outcomes (Dean Jr & Sharfman, 1996). Because the effectiveness of business operations is primarily influenced by how decisions are formed and implemented, the study of decision-making within an organisational context is becoming increasingly significant. The decision-maker is a constant and ever-present component when we study the nature of decision-making. As a result, they play a vital role in the decision-making process. Leaders who regularly take on the position of decision-maker are continually expected to assess options and create views regarding various difficulties (Omarli, 2017).

According to study findings, problem-focused coping is favourably connected with decision-making self-esteem and readiness but adversely associated with buck-passing, procrastination, and hypervigilance. Individuals who engage in issue-focused coping focus exclusively on the topic, communicate their opinions and suffer from it (Deniz, 2006). Leaders and other individuals are responsible for decision-making, a critical managerial task. Since leadership decisions impact how successfully a corporation accomplishes its commercial goals and successes, the study of decision-making is becoming more crucial. The choice factor is crucial in decision-making because it affects how a leader makes decisions. The leadership choice is strongly influenced by

a leader's personality and other relevant variables, all influenced by the IP. Personality is a psychological construct developed to comprehend and explain. The total of a human being may be comprehended as the total of the epistemic, pragmatic and axiological functions through personality (Zaccaro *et al.*, 2008).

The conviction in one's ability to succeed and accomplish the intended results is known as self-efficacy (Bandura, 1977). In this instance, the negative association between self-efficacy and perceived organisational support justifies the IP. Even if a person is intelligent and competent, the IP will result in poor self-efficacy and professional difficulties. Individuals that get a substantial amount of organisational support exhibit fewer minor impostor phenomena. Consequently, supportive organisations may reduce the impostor effect and ameliorate some negative consequences of poor self-efficacy (McDowell *et al.*, 2015).

Learning affects one's behaviour. Individuals with impostor thoughts frequently make unfavourable comparisons and fear that others would assume they are less competent than their peers; hence, self-efficacy may be associated with the IP (Clance, 1985). Modelling, self-correction in response to feedback, and understanding consequences contribute to learning (Bandura, 1977). To acquire and sustain behaviours, motivation and other cognitive processes are essential (Bandura, 1986; Roskowski, 2010).

One's degree of self-efficacy is influenced by how one views their skills. Some claim that abilities are learned skills that improve with practice and performance. According to research, a distorted view of one's talents is associated with low self-efficacy. Others feel that talent is inherent. Individual failures are frequently the result of an erroneous belief in innate ability, as is interpreting others' triumphs as dangerous (Bandura, 1993).

Facing challenges reduces self-efficacy and strategic thinking and makes accomplishing goals easier. Furthermore, low self-efficacy, poor reasoning, lax goal-setting and unpleasant mood have all been linked to input, implying a person's performance is below average or deteriorating. Consequently, social comparison and the assumption that intrinsic abilities exist lead to a rise in self-efficacy and performance (Bandura, 1989; Bandura & Jourden, 1991).

A study of women who have encountered impostors suggests that impostors have a natural ability for visual perception, which is in line with the IP's aetiology (Kumar & Jagacinski, 2006). This concept is essential to the IP because it removes the possibility that unfavourable comparisons may induce emotions of the IP (Clance & Imes, 1978). Evidence shows that the Impostor

Phenomenon negatively impacts mental health (Cokley *et al.*, 2013). Examples of mental health issues include anxiety, sadness, introversion, poor self-esteem, and perfectionism (Clance, 1985; Cokley *et al.*, 2013; Schubert & Bowker, 2019). Self-efficacy is both directly and indirectly connected with depression. Low self-efficacy hinders advancement, good social interactions and unwanted behaviour, leading to dissatisfaction. Depression is associated with emotions of inadequacy rather than real accomplishment (Bandura, Pastorelli, *et al.*, 1999).

Self-efficacy has been shown to influence decision-making that impacts organisational performance. Wood and Bandura said high self-efficacy encouraged individuals to embrace higher standards and more analytical problem-solving techniques. When participants were given decision-making tasks to reach specific levels of organisational performance, performance might be improved by using problem-solving approaches (Bandura & Wood, 1989; Bandura & Jourden, 1991). Deficits in self-efficacy have been related to poor performance and decision-making. Decision-makers who believe they are making progress on organisational tasks are more successful, set higher targets and achieve more extraordinary organisational performance, according to Bandura and Jourden. Self-efficacy in professional advancement has also correlated with selection (Bandura, 1993; Bandura & Jourden, 1991; Lent *et al.*, 1994).

Making decisions and one's sense of value are related. The results show that individuals make more thoughtful judgements and have more confidence in their decision-making skills when their self-esteem is higher. When a person has low self-esteem, they have less confidence in their capacity to make appropriate decisions. Common decision-making strategies include avoidance, procrastination, neglect, and hypervigilance (Filippello *et al.*, 2013).

The social cognition theory holds that our efficacy controls human conduct. Our self-efficacy beliefs influence our decisions, efforts, resiliency in the face of adversity, and emotions. Individuals who feel confident in their abilities are likelier to choose complex jobs that need original thinking (Hsiao *et al.*, 2011). Kumar and Uzokurt investigated how self-efficacy affected the innovative thinking of professionals in a cultural environment. Their research demonstrates a connection between self-efficacy and creativity (Kumar & Uzokurt, 2011). Self-efficacy seems to be higher among innovative persons. As a result, it is conceivable to assert a connection between self-efficacy and IWB (Hsiao *et al.*, 2011).

Innovative workplace behaviours include new idea generation, concept promotion and implementation planning. An earlier study discovered that employees with greater degrees of innovative self-efficacy were likelier to participate in higher creativity at work. A well-stated

purpose will facilitate the implementation of innovative concepts. This is a gradual and organic process. According to Jassen's notion of innovative behaviour, individuals often begin by generating new ideas and then embed the promotion of those ideas (Janssen, 2000). Research indicates that those with greater self-efficacy in critical leadership abilities do so more frequently and successfully than those with a lower sense of self-efficacy. Previous meta-analyses correlating self-efficacy to overall work performance and more recent research linking self-efficacy to effective leadership substantiate this assertion (Anderson *et al.*, 2008).

Self-efficacy is a factor in management decision-making. Complex procedures, uncertainty, politics and conflicting interests play a role in organisational decision-making. Leaders make critical decisions in companies that range from basic to chaotic (Snowden & Boone, 2007). Leadership studies have prioritised theories and styles of leadership but have ignored leaders' expected behaviours (Aparna & Menon, 2020; Clance *et al.*, 2017). Identity is an essential trait of leaders. Managers' opinions of their capacity for decision-making are related to their level of self-efficacy in that area. Being in a management position places tremendous pressure on leaders to demonstrate their expertise.

Previous studies have shown that impostors' low self-efficacy is crucial to the IP. Self-efficacious individuals are self-assured and complete tasks with enough effort and effectiveness (Myburgh *et al.*, 2015). By incorporating the IP into the decision-making process, managers with low self-efficacy undermine their capacity to make sound judgements by doubting their conclusions or preferences (Aparna & Menon, 2020).

The impostors can make reasonable judgements but are unsure of their choices. They may see themselves as "impostors" and defend their behaviour because they lack professional expertise. They often show anxiety about their choices. They commonly worry that someone will find them unqualified for this decision-making position owing to their bad judgement and lack of experience or training (de Villiers *et al.*, 2016).

Low self-efficacy and self-esteem substantially negatively influence a person's performance and how they are seen by their peers, followers, and others. Leaders' ineffective self-assessment of their competence has a detrimental influence (Kaplan & Kaiser, 2006). When leaders seek to overcome deficiencies they lack, they may be seen as "overbearing" or "know-it-alls." They may avoid making difficult personal decisions for fear of being seen as socially inept or lacking empathy, even though they are regarded as having exceptional individual qualities (de Villiers *et al.*, 2016).

The shift in followers' impressions of leaders from a previously favourable view to the impostor's "exaggerated behaviour" leads to a drop in both followers' and leaders' performance. A higher level of the influence of the IP also increases worry, fear, uncertainty and psychosomatic symptoms in those who encounter it (Clance *et al.*, 2017). These individuals struggle to function at their best because they are more introverted, hypercritical and fearful of failure (de Villiers *et al.*, 2016; Kaplan & Kaiser, 2006). As a result, the IP will profoundly affect leaders. To mitigate the effect of this phenomenon on their decision-making self-efficacy and IWB, leaders must be able to recognise, analyse and regulate its effects. The next section presents a discussion of IWB in leadership contexts.

1.6.4 Innovative Work Behaviour

The IP may influence a leader's problem-solving ability in the same way as it influences decision-making. Innovative work behaviour (IWB) is the deliberate creation, introduction and use of novel concepts inside a work role, group or organisation to enhance the performance of the role, group or organisation. IWB may include concept creation, marketing and execution (Ramamoorthy *et al.*, 2005).

The knowledge dynamics regulate this influence since all decision-making is based on information and knowledge processing. However, previous studies on knowledge dynamics in decision-making are based on explicit and implicit data (Davenport & Prusak, 1998; Nonaka, 1994; Nonaka & Takeuchi, 1995). Detailed knowledge refers to knowledge that can be articulated and transmitted using natural or symbolic language. Tacit knowledge, which includes irrational insights, intuitions and hunches, is more difficult to define since it arises from first-hand experience. Explicit knowledge influences how an individual who suffers from the IP perceives their surroundings. This, in turn, influences their perception of themselves and how they need to present themselves in a social context.

Employees require psychological empowerment to participate in IWB and complete the complicated procedure (Kraimer *et al.*, 1999). Studies show that intrinsic motivation enables individuals to feel autonomy, competence and significance in the workplace (Ryan & Deci, 2000). Employees in the innovation environment evaluated their surroundings to support their IWB. If they experience a supportive atmosphere, employees are more inclined to show IWB (Javed *et al.*, 2019).

Innovative work behaviour is a notion that is separate from creativity. While creativity pertains to generating new ideas, IWB includes producing new ideas and their marketing and execution. Employees are motivated to create, promote and execute innovative and beneficial ideas because they are allowed by inclusive leaders to participate in meaningful work activities (Choi *et al.*, 2015). Their followers' interests, expectations and sentiments are essential to inclusive leaders. Inclusive leaders listen carefully to what their team members have to say. Employees are more motivated to engage in IWB when they feel energised and more committed to their organisation (Javed *et al.*, 2019). Employees are driven to participate actively in problem-solving that requires new concept creation. From the social exchange theory, inclusive leadership encourages positive social connections, enhances cognitive thinking and motivates participation in innovative work (Javed *et al.*, 2019). The social exchange hypothesis demonstrates the link between inclusive leadership and IWB. When a leader demonstrates inclusive and supportive leadership qualities, employees are driven to remain loyal to the leader and the organisation (Cropanzano *et al.*, 2017).

Research has also suggested that psychological empowerment may improve IWB. As a result, the link between inclusive leadership and IWB was influenced by psychological empowerment, which got less attention in the study (Javed *et al.*, 2021). Openness, availability and accessibility are characteristics of an inclusive leader. Inclusive leaders are an excellent situational component that may help employees feel more psychologically empowered (Javed *et al.*, 2019).

Businesses are experiencing increasing pressure in this fast-paced period of change to innovate and modify their goods and services to remain competitive. Organisations rely on their staff to innovate procedures, strategies and operations to accomplish this purpose. If organisations want to gain from IWB, individual employees must engage in it (Ramamoorthy *et al.*, 2005). Numerous frameworks have examined the characteristics that inspire workers to participate in IWB. Research on job design found that individuals with more freedom and flexibility at work are more inclined to act creatively and innovatively (Ramamoorthy *et al.*, 2005). According to organisational justice research, IWB may be impacted by distributive and procedural justice components. Mutual contractual obligations may affect an employee's working behaviour. Employees may be required to engage in IWB to meet their psychological contracts (Ramamoorthy *et al.*, 2005).

IWB involves consciously creating, applying and implementing fresh concepts inside a work role, group or organisation to enhance that role, group or organisation's performance. IWB is deliberate attempts that result in distinctive and positive consequences. Improved organisational performance and social-psychological benefits for individual employees or groups of employees,

such as a better match between perceived job demands and a worker's resources, increased workplace happiness and improved interpersonal communication, are innovation dividends (Janssen, 2000).

By helping others do their tasks more effectively, employees who display these behaviours will likely benefit the business, the group or even just one person. Individuals may or may not feel driven to engage in behaviours based on their belief in the degree to which their psychological contracts have been honoured. Employees who decline to participate in IWB may avoid violating the organisation's contract and facing unfavourable consequences. IWB is more probable due to workers' inherent goals and beliefs about fulfilling the psychological contract within their work-related roles (Ramamoorthy *et al.*, 2005).

Innovative work behaviour was later described as a person's behaviour intended to begin and introduce fresh and beneficial ideas, processes, objects or procedures. Additionally, IWB is a complex behaviour involving three different non-sequential and independently conducted behavioural activities: idea development, idea promotion and idea implementation. Individual innovation in every sector begins with generating novel and beneficial thoughts. Workplace issues, inconsistencies, discontinuities and developing trends are typical catalysts for producing new ideas (Janssen, 2000).

Furthermore, IWB refers to behaviour outside of one's assigned function not explicitly recognised by the incentive structure (Reuvers *et al.*, 2008). Due to the discontinuous nature of innovative processes, individuals might engage in a mix of these behaviours at any time. Extra-role behaviour refers to discretionary employee acts that exceed established role norms and are not recognised by the official compensation structure either explicitly or implicitly (Janssen, 2000).

The line between creativity and innovation is hazy. Academics and professionals alike emphasise the crucial part that IWB plays in the effectiveness of organisations. Today's organisations must have the ability to reinvent their goods, services and operational procedures continually. As a result, interest in innovation as a topic for research has increased significantly during the last two decades. Innovation studies examine how organisations, workgroups, networks and individuals manage innovation (De Jong & Den Hartog, 2010).

IWB is generally understood to encompass various actions related to generating ideas, creating support, and facilitating implementation (De Jong & Den Hartog, 2010). While early studies mainly concentrated on developing new ideas, later research argued for a broader scope and more in-

depth analysis of their implementation. Even though IWB is a multidimensional phenomenon, most IWB measurements are one-dimensional (Reuvers *et al.*, 2008). Practical knowledge of the accuracy of IWB measurement is scarce. Most research relies entirely on data from a single source, such as employee assessments of IWB and its correlations (De Jong & Den Hartog, 2010). Janssen (2000) created a multidimensional measure using self and other IWB ratings for the first time. Concept creation, marketing and execution were the main areas of attention for the framework he produced. However, he determined that they should all be combined and used as one additive scale.

Fear of failure plays a role in IWB. The purposeful invention of unique and applicable ideas and their promotion and application in a work position, group or organisation is regarded as innovative work behaviour (West *et al.*, 1990). The individual IWB process consists of three steps: developing ideas, advancing concepts, and implementing ideas (Kleysen & Street, 2001). Promoting an idea entails a significant amount of difficulty and danger. As a result, risk tolerance is one of the most critical requirements for IWB, including a high level of objective ambiguity. For risk-averse individuals, tasks with ambiguous aims are difficult to accept. Ambiguous goals increase the chances of failure in such undertakings. Another distinguishing feature of impostors is their dread of failure (Neureiter & Traut-Mattausch, 2016). As a result, impostor leaders may struggle to engage in innovative workplace behaviours (Aparna & Menon, 2020).

According to the research on managers or leaders who suffer from IP, they think negatively about their abilities. Task delegation decisions by managers are influenced when they feel like impostors in their positions (Rohrmann *et al.*, 2016). Impostors are less likely to investigate alternative job prospects since they are less conscious of their skills and abilities. An impostor believes that landing a job requires luck, being in the right place at the right time, or having the appropriate connections. As a result, they are less engaged in their professional growth. Additionally, earlier studies suggest that IP may impact occupational self-efficacy (Clance *et al.*, 2017; Clance & Imes, 1978). The IP and higher-degree candidates' self-efficacy in research are negatively correlated (McDowell *et al.*, 2015). It is expected that impostors struggle to see themselves in other, potentially more successful professional positions, given their conviction that they are merely pretending to be confident in their talents (Neureiter & Traut-Mattausch, 2016). The researchers, therefore, predicted that the IP would positively correlate with professional decision-making concerns and negatively with career planning, career exploration and occupational self-efficacy (Neureiter & Traut-Mattausch, 2017).

According to studies, the IP may improve professional decision-making and foster more flexible career exploration, planning and self-efficacy approaches. Workforce workers and students should avoid this influence when deciding on a job. Impostors are less inclined to assume leadership responsibilities or strive for higher positions in their personal and professional lives (Neureiter & Traut-Mattausch, 2016, 2017). The IP may compromise these leadership behaviours at work. The learning and career development sector of human resource development (HRD) often overlooks the impostor problem. The primary reason is that even corporate training professionals are unaware of its existence. The cures are primarily directed at organisational stress and anxiety, with little regard for the IP's possible relevance as a prelude to these outcomes (Aparna & Menon, 2020; Clance *et al.*, 2017; Rohrmann *et al.*, 2016).

In the next section, the fundamental concepts of this research are elaborated.

1.7 DEFINITION OF KEY CONCEPTS

1.7.1 Impostor Phenomenon

The IP, also known as impostorism, deception phenomenon or the impostor experience, is a mental disorder in which a person constantly doubts their abilities, skills or accomplishments and is revealed as a “fake” (Oxford English Dictionary, 1989). The term “IP” refers to individuals who have experienced this phenomenon feeling their success is just coincidental or a result of their connections rather than their intelligence or ability (Clance & Imes, 1978; Cusack *et al.*, 2013). The IP exaggerates failures (Cowman & Ferrari, 2002; Orbé-Austin & Orbé-Austin, 2020).

The IP convinces these individuals that their success is primarily due to their ability to deceive others into believing they deserve it (Clance & Imes, 1978). This phenomenon represents an individual's impression of intellectual phoniness (Clance & Imes, 1978). The IP is a dysfunctional personality style as a group of psychological traits (Ross & Krukowski, 2003; Vergauwe *et al.*, 2015). The IP is caused by perfectionism, which adds to dread and self-doubt (Persky, 2018).

1.7.2 Self-Esteem

Self-esteem is a belief in one's worth or abilities (Oxford English Dictionary, 1989). It represents how individuals see themselves and how they keep that view. Acceptance or rejection also includes feelings of value, aptitude, importance and efficacy. Self-esteem is an integral part of the self, including mental, behavioural, emotional and moral considerations (Coetzee *et al.*, 2006; Garrety *et al.*, 2003; Leary, 1999a, 1999b). It depicts how individuals view themselves and how

they hold onto those views. In addition to acceptance or rejection, it also includes sentiments of worth, aptitude, applicability and efficacy. Self-esteem is a significant component of our identity, including our thoughts, behaviours, opinions and feelings (Battle, 1992; Baumeister & Leary, 1995; Coetzee *et al.*, 2006). "Individual self-esteem" refers to a person's fundamental beliefs and sense of self-worth. This study found that this aspect of self-esteem influences how an impostor is perceived (Battle, 1992).

1.7.3 Decision-Making Self-Efficacy

Decision-making is the capacity to make decisions, including taking part in collective decision-making, known as self-efficacy (Oxford English Dictionary, 1989). Decision-making is a vital managerial responsibility for which leaders and other personnel are accountable (Rus *et al.*, 2019). Management is about decision-making, affecting every aspect of the organisation's operations and outcomes (Dean Jr & Sharfman, 1996). It emphasises a logical approach based on economic principles and quantitative modelling. At the same time, behavioural economics integrates different aspects derived from cognitive and strategic sciences. Decision-making is a complicated process with both rational and irrational components (Bratianu *et al.*, 2018; Johnsen & Glick, 2016; O'Brien, 2012). Decision-making is a complicated process requiring a person's strategic thinking to solve a present challenge. Challenging decisions demand deliberate and actionable strategic thought (Rus *et al.*, 2019; Yagnik & Chandra, 2019). The underlying assumption of decision-making models is that rational decision-making leads to action. Leaders typically lack comprehensive information and competence in real-world circumstances; as a result, decision-making models combine limited rationality with probabilistic reasoning (Bratianu *et al.*, 2018; Davenport & Prusak, 1998; Hallen & Pahnke, 2016; Nonaka, 1994; O'Brien, 2012).

1.7.4 Framework

A Framework is defined as a basic structure underlying a system, concept, or text: A set of principles, ideas, or rules that provides the foundation for something (Oxford English Dictionary, 1989). In the context of the proposed study, a "framework" refers to a structured conceptual model that outlines the relationships, interactions, and connections between the Impostor Phenomenon and critical leadership competencies within the South African context. This framework serves as a strategic guide, systematically organising the various components of the Impostor Phenomenon and leadership competencies and providing a clear roadmap for analysing how the Impostor Phenomenon influences and intersects with specific leadership skills and behaviours. It establishes a structured foundation for the study's methodology, enabling the systematic

exploration, measurement, and assessment of the complex dynamics between the Impostor Phenomenon and leadership competencies.

1.7.4 Innovative Work Behaviour

Innovative work is when a person intentionally introduces and applies new concepts, items, methods and techniques to a professional role, unit or organisation (Oxford English Dictionary, 1989). This behaviour entails inventing, introducing, and applying innovative concepts within specific contexts (Ramamoorthy *et al.*, 2005). IWB leads to an increase in the efficacy of a job function, group or organisation. Improved organisational performance and social-psychological benefits for individuals or groups, such as a better match between perceived job demands and a worker's resources, increased workplace happiness, and improved interpersonal communication, are innovation dividends (Reuvers *et al.*, 2008).

1.7.5 Leadership / Management

Managers and leaders differ in their approach, focus and scope of responsibility. Managers are typically responsible for overseeing and directing the work of a specific team or department within an organisation, while leaders have a broader scope of responsibility and often oversee multiple teams or departments (Kotterman, 2006; Perrin, 2010; Tyler, 2020)

Managers are typically more focused on processes and systems, ensuring work is completed efficiently and within budget. They often use a directive approach, providing clear guidance and instructions to their team members to ensure that tasks are completed on time and to a high standard (Turk, 2007; Weninger, 2012). Leaders, on the other hand, are more concerned with individuals and their growth. They frequently take a more visionary approach, establishing the organisation's direction and tone while inspiring and motivating their team members to achieve more significant achievements. A more participative approach is frequently used by leaders, who encourage their team members to take ownership of their work by asking for their opinions and feedback (Northouse, 2019). Although the functions of leaders and managers differ significantly, this study focuses on the leadership competencies of managers within South Africa; therefore, the terms manager and leadership are used interchangeably.

1.8 STUDY METHODOLOGY

This study was conducted within the quantitative paradigm using a cross-sectional correlational questionnaire design to attain the research objectives, provide answers to the questions and test

the hypotheses. The population was all managers in South Africa. Convenience sampling was used to obtain a representative sample. Descriptive and structural equation modelling and other data analysis methods were used to analyse the data. These methods as well as the details of this study's research methodology, are discussed in detail in Chapter 4. In the next section, the outline of the thesis is presented.

1.9 OUTLINE OF THE DISSERTATION

- *Chapter 1: Introduction to the study.* The study's themes were outlined in the first chapter. This chapter furthermore summarised the problem, direction, study aims and research questions. The preliminary literature review presenting the main constructs of this research was also included in this chapter.
- *Chapter 2: Theoretical Framework:* This chapter sets out the theoretical framework for the remainder of the review. It looks at the compatibility of the definition of the study's core ideas and relationships with the theories chosen to support them.
- *Chapter 3: Literature review:* The literature review for this research is presented in Chapter 3. This chapter will explain the IP, which will include the phenomenon's history and origin. The IP, decision-making self-efficacy and innovative work practices are included. This section also includes the impostor loop, influences, triggers of IP, coping mechanisms, tools to measure IP and types of impostors. This literature review will also present discussions of self-esteem, IWB and self-efficacy decision-making. The following themes will also be addressed:
 - Self-esteem: defining self-esteem; the role of self-esteem in the validation of oneself; self-esteem as a mediator; and the relationship between self-esteem and the IP and leadership.
 - Self-efficacy: defining self-efficacy; the role of self-efficiency in motivation; self-efficiency as a mediator; and the relationship between self-efficacy and the IP and decision-making.
 - Leadership decision-making: the process of decision-making and influencing factors; and
 - IWB: definition of innovative work behaviour; the dimensions of IWB; measurement of this construct and the innovation of psychosocial contract and leadership in IWB; and the relation of these concepts.
- *Chapter 4: Research Methodology and Design:* Chapter 4 discusses the research paradigm in detail. This includes terminology often associated with the basic research paradigm, such

as the research method, ontology, epistemology, theoretical perspective, methodology and the method of this study. The research plan, philosophy and research methodology are all included in this chapter, along with the study's assumptions. The sample, tools, data-gathering process and analysis are described.

- *Chapter 5: Data analysis and interpretation of results:* The quantitative findings of the cross-sectional survey are examined in Chapter 5. The IP, IWD and self-efficacy in decision-making are all topics covered in this analysis. The demographics and sample size of the data are included in this chapter. Issues relating to the research design and the data are examined. The process of data analysis and interpretation is also covered. Finally, this chapter develops links between the critical components of the research. It will also be assessed whether self-esteem had a mediating function in this study.
- *Chapter 6: Discussion and conclusion:* This study seeks to understand the relationship between the IP and the research components. It evaluates how this phenomenon affected innovative work practices and decision-making self-efficacy. By presenting the findings, the connection between these areas is illustrated. The findings are summarised, and the answers to the research questions are provided. This chapter includes recommendations for further research, explanations for these topics and their significance for current practice.

1.10 SUMMARY

Within this first chapter, the research problem for the thesis was presented. The study's objectives were outlined, followed by the research questions. The background, the general study design, the research paradigm, core theoretical claims and preliminary literature review were presented. The next chapter, Chapter 2, will describe the theoretical foundation for the remaining sections of the study. An overview of the literature related to chosen theories will highlight the three research areas – the IP, IWB and decision-making self-efficacy. This chapter examines the connections between the research's key objectives and its identified theories.

CHAPTER 2

THEORETICAL FRAMEWORK OF THE IP, SELF-ESTEEM, DECISION- MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR

*“Despite its name, the big bang theory is not a theory about a bang at all.
It’s really only a theory of the aftermath of a bang”*
- Alan Güth-

2.1 INTRODUCTION

The theoretical underpinning of the main concepts presented in this study is discussed in this chapter. These underpinnings will form the framework that guides the analysis process and provides a theoretical foundation for describing this study’s philosophical, epistemological, methodological and analytical methods. This framework focuses on the IP, self-esteem, decision-making self-efficacy and IWB, which are this study’s main constructs. This chapter further presents ideas that explain the research problem’s existence; it seeks to explain individual behaviours within the context of the IP using the principles of current theories. The main constructs and their theoretical foundations are depicted in Table 2.1.

Table 2.1: Constructs and theoretical foundations

IP	SELF-ESTEEM	DECISION-MAKING SELF-EFFICACY	INNOVATIVE WORK BEHAVIOUR
• Cognitive Dissonance Theory	• Self-concept theory	• Social cognitive theory	• Self-regulation theory
• Attribution Theory	• Implicit theory of intelligence	• Conflict model of decision-making	• Goal-setting theory
• Social Identity Theory			

2.2 IMPOSTOR PHENOMENON

Like other self-deprecating biases, impostorism is associated with unfavourable psychological consequences. The IP exacerbates self-criticism and poor self-esteem. It also increases individuals’ sensitivity to negative feedback (Chrisman *et al.*, 1995; Cozzarelli & Major, 1990; McLean, 2017). Impostors who get adverse feedback about their ability are likely to abandon their performance goals if they internalise the criticism (McLean, 2017).

Impostors are characterised by the need to reach high-performance standards and a feeling of pretension. Although research indicates that self-esteem and the IP are related, the negative

impacts of an individual's failures are caused by impostor feelings, not by low self-esteem (Cozzarelli & Major, 1990). An attributional style which emphasises internal causes for failure increases failure anxiety and reduces self-confidence and self-efficacy (Kumar & Jagacinski, 2006). The following section discusses the cognitive dissonance theory, the attribution theory and the social identity theory as the theoretical foundations of the IP within this study.

2.2.1 Cognitive Dissonance Theory

According to the cognitive dissonance theory, psychological tension develops when a person's actions are at odds with their values and beliefs. This underlying tension encourages individuals to adopt a new mindset consistent with their beliefs and actions. Because of this conflict, psychological tension is formed when a person's behaviours contradict their opinions and beliefs. Individuals are then motivated to change their views to achieve mental and behavioural coherence. These individuals may also intentionally engage in unpleasant activities to attain a specific goal (Aronson & Mills, 1959; Stone *et al.*, 1994). Individuals will go to extremes to justify their contradicting beliefs by increasing the appeal of the objective, which leads to alleviating the mental anguish caused by cognitive dissonance (Dawson, 1999; Festinger, 1962a, 1962b; Fointiat, 2004; Fried & Aronson, 1995; Hing *et al.*, 2002; Kataria & Regner, 2015; Nyborg, 2011).

When confronted with an internal conflict, individuals experience psychological distress and are motivated to resolve the issue. This behaviour can potentially encourage positive and harmful social behaviour (Dawson, 1999). The variables or components influencing the psychological dissonance caused by contradicting beliefs or behaviours must be considered. The greater the value of one component, the more dissonant its interaction with the other components becomes. It is difficult to determine whether to act when two conflicting components are evident. In the individual's opinion, each has a subjective truth stance (Dawson, 1999; Festinger, 1962a, 1962b). Individuals experience cognitive dissonance when making decisions or delivering judgements because of the varying amounts and quality of knowledge and information they obtain (Oshikawa, 1972). Every person has a certain level of discomfort that they can tolerate. Discordant inputs affect individuals' performance when they are in the tolerance range. When these aspects have too many conflicting features and little agreement, a person will keep one of the contending elements while rejecting the other to restore balance (Boring, 1964).

According to the cognitive dissonance theory, individuals seek psychological coherence between their life objectives and existentialist actuality. To meet the criterion of existential consistency, individuals must consistently align their worldviews and actions to minimise cognitive discomfort.

Psychological consistency enables a person with cognitive dissonance to alleviate the mental strain by changing with, rationalising against, or remaining indifferent to the existential contradiction causing mental strain (Festinger, 1962a). Individuals may dismiss information that contradicts their assumptions, believing the action will not achieve the desired result. Individuals may also explain their behaviour or cognition by adding new actions or perceptions, allowing them to participate if specific criteria are met. They rationalise their actions or beliefs by changing their opposing viewpoints; when individuals' opinions conflict, they seek information supporting them (Jean Tsang, 2019). To improve individual performance, organisations and psychologists explore the apparent locus of causation; this idea recognises and boosts an individual's motivation and goal orientation (Extremera *et al.*, 2016; Kelley, 1973; Ryan & Connell, 1989). According to Gestalt psychologist Fritz Heider, an individual's attributions can be interpreted as their ambitions, intentions and feelings; this idea of perceived locus of causation underpins self-determination (Malle, 2006). Research indicates that individuals with a strong sense of causality are better suited to comprehend greater autonomy, relatedness, and proficiency in particular tasks (Turban *et al.*, 2007).

This theoretical foundation aims to support the problem raised in this study as to whether the internal conflict caused by the IP influences the outcome of the decision-making and the IWB of the impostor. This theory forms part of this theoretical construct, as impostors experience cognitive dissonance because their conduct is inconsistent with their views and beliefs; therefore, underlying psychological tension is formed. Individuals who experience the IP are harmed by attributing achievement to external forces. Their philosophy asserts that strenuous effort and experience do not enhance skill and are not concerned with successful outcomes. Neither empirical proof of accomplishment nor genuine subjective effects are sufficient to alleviate their emotions of impostorism (Kumari *et al.*, 2019). Many impostors have gained formal acknowledgement from their peers for their professional achievements and academic excellence, as evidenced by degrees obtained. Despite external validation, these individuals refrain from internalising their accomplishments (Clance & Imes, 1978).

Impostors disregard their intelligence and ability and think that chance affects their outcomes. They attribute failure to circumstances rather than their shortcomings. This phenomenon symbolises the insecurity experienced by individuals who believe their achievements are unjustified despite overwhelming evidence to the contrary (Cusack *et al.*, 2013). An impostor is encouraged to adopt a new mindset that results in consistency between their beliefs and actions by the underlying conflict. An impostor has internal impostor feelings when asked to execute a task they can perform but believe they cannot succeed in doing the task well. Thus, they have

two different internal beliefs about who they are and who they believe they are. Their impostor feelings make them believe they are unqualified for the activity and should not engage. This makes the individual feel unsettled, which leads to dissonance. Reasoning occurs when impostors act in ways that contradict their logical views, such as putting in extra effort to achieve a goal, to avoid being exposed as a fraud (Gächter *et al.*, 2013; Harmon-Jones & Mills, 2019).

2.2.2 Attribution Theory

Individuals strive to comprehend the behaviour of others by assigning emotions, ideas and intentions to them, according to the attribution theory. This theory describes how individuals attribute external or internal causes to ordinary events. It aims to understand why a specific action is attributed to one or more causes (Kassin *et al.*, 2019; Weiner, 2010). In this theory, external and internal motivation are used to classify attributes. For example, an event may be triggered by events outside the individual's control, resulting in external consequences and internal repercussions generated by the individual's actions or reactions (Goudas *et al.*, 1994; Lilienfeld *et al.*, 2010; Ryan & Connell, 1989; Turban *et al.*, 2007).

Also known as dispositional attribution, internal attribution ascribes behaviour to internal features, likeability or purpose rather than external factors (Myers, 2010). For example, suppose a co-worker was promoted because of their hard work and dedication to a project. In that case, this may be seen as an internal attribution. However, should the co-worker have been promoted because the company's owner is a relative, there is a chance for advancement. This progress is thus regarded as externally traceable since it resulted from external causes. Individuals are more likely to ascribe unfavourable conditions to external sources than their acts, as seen in this scenario (Hyland & Cooper, 1976).

Cognitive evaluations of a person's attributions may impact their future behaviour. According to Weiner (1992), early emotional reactions are elicited by an individual's internal or external objectives. Stability, control and casualty are essential when analysing these emotional influences. Stability affects a person's future expectations, while causality affects emotional responses to finishing a task (Munton *et al.*, 1999). Therefore, unstable emotions and a loss of anticipation for future achievement can lead to a lack of drive to complete a task.

This theoretical foundation aims to support the problem raised in this study as to whether the impostor is driven by the influence of their internal attributions (their impostor's feelings that they are not worthy) or the external attribution (expectations set by others). These notions confirm whether their impostor sentiments influence their decision-making-self efficacy and IWB abilities.

This theory forms part of this theoretical construct as impostors strive to comprehend the behaviour of others by assigning emotions, ideas and intentions to them – the impostor's attribution to external or internal causes to ordinary events. Impostors are affected by both internal and external attributions. Prejudice develops from a need to defend one's self-image rather than a sense of inner self-concept. Those impacted by the IP will refrain from engaging in intentional behaviours. They fear their "phoniness" will be discovered, which protects their self-worth because they do not believe they deserve it (Langford & Clance, 1993). Impostors frequently employ protective attribution to reduce feelings of vulnerability and distinguish themselves from their impostor sentiments (Shaver, 1970). As a result, the likelihood of success for impostors is diminished, as they are more likely to ascribe their failure to a lack of competence (Langford & Clance, 1993).

Impostors attribute their success to external causes; they believe hard work and experience do not improve competence (Kumari *et al.*, 2019). Even though many impostors have received formal recognition from their peers for their professional accomplishments and intellectual ability, as evidenced by external recognition, these individuals still hesitate to recognise their achievements themselves, being dominated by internal attributions rather than guided by their external attributions (Clance & Imes, 1978).

2.2.3 Social Identity Theory

Social Identity Theory is closely related to the imposter phenomenon, shedding light on its underlying dynamics. According to this theory, individuals derive a sense of self and belonging from the groups they identify with. In the context of the imposter phenomenon, individuals might feel inadequate despite objective achievements because they attribute their success to external factors rather than their abilities. This stems from a fear of not living up to the perceived standards of their social or professional groups. The imposter phenomenon thus emerges as a manifestation of the internal conflict between personal achievement and the desire to conform to the expectations of one's identified groups, underscoring the intricate interplay between individual psychology and social context.

Social identity theory in sociological psychology examines the interaction between social and personal identities. Social identity theory aims to recognise and predict the situations in which individuals and members of groups view themselves. The theory also looks at how individuals' social and individual identities impact how they see the world and interact with others. According

to social identity theory, labelling others based on educational attainment is a form of self-comparison.

The phrase “social identity approach” refers to a theoretical framework and perspective within social psychology that focuses on how membership in various social groups shapes individuals’ sense of self and identity. It emphasises the idea that people derive a significant part of their identity from the groups they belong to, such as their nationality, ethnicity, gender, religion, or other social category that holds personal significance. Social identity theory, developed by Tajfel and Turner in the 1970s, is a central component of the social identity approach. It posits that individuals strive for positive social identity and engage in a process called social categorisation, where they categorise themselves and others into specific social groups. According to social identity theory, individuals are resistant to change. Individuals with these beliefs view their skills and personality traits as inherent, unchanging parts of who they are. This viewpoint leads to individuals thinking their attributions are fixed and cannot be altered (Tajfel & Turner, 1986; Tajfel *et al.*, 1979; Turner, 1999; Turner & Reynolds, 2010).

This theory anticipates specific intergroup behaviours related to the perceived disparities in in-group status, validity and stability (Tajfel *et al.*, 1979; Turner, 1999). A person’s sense of self is impacted by belonging to a particular social group (Turner & Oakes, 1986). Social identity theory aims to provide interpersonal psychology and social group dynamics with a more socialist viewpoint (Hogg & Williams, 2000). Broad views of social reality regulated by social categorisation result in a social environment in which vast population sectors are engaged in a protracted conflict (Tajfel & Turner, 1986). As per social identity theory, a group or organisation may influence a person’s self-identification or self-concept depending on their familiarity with and emotional connection to the group, which may affect their behaviour (Tajfel *et al.*, 1979).

According to the authors of social identity theory, identity in real social situations is essentially interpersonal. Thus, it is anticipated that behaviour would be guided by personal and societal forces (Tajfel *et al.*, 1979). The cognitive underpinnings of individual and interpersonal identities and their relationships are examined further by the self-categorisation theory (Turner & Oakes, 1986; Turner & Reynolds, 2001, 2010). The self-categorisation theory is a social psychological theory that explores how individuals perceive and categorise themselves and others into social groups. It suggests that individuals have a natural tendency to categorise themselves and others based on shared characteristics, such as beliefs, values, interests, or attributes. According to this theory, the process of self-categorisation influences our social identity, group behaviour and intergroup relations. Social categorisation theory, thus, relates to the societal and organisational

essentials that decide which end of the scale has the most impact on a person's behaviour, as well as the many arrangements that behaviour may take (Martin & Epitropaki, 2001; Turner, 1999; Turner & Reynolds, 2001). Figure 2.1 represents these explanatory profiles of social identity and self-categorisation theories.

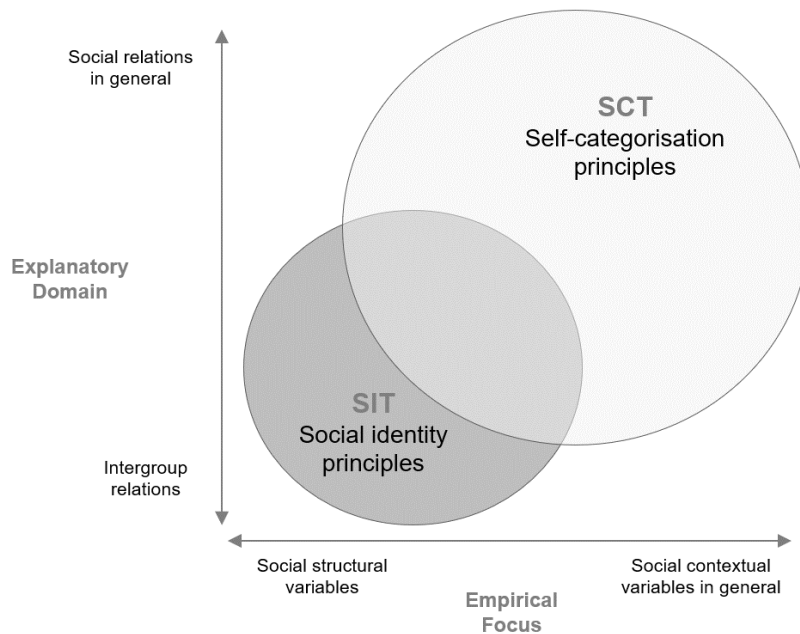


Figure 2.1: The Explanatory Profiles of Social Identity and Self-Categorisation Theories

Source: (Haslam, 2004)

Social identity significantly affects the team dynamics of a business or an organisation. Regarding in-group-favouritism bias, the other team members will internalise positive and poor behaviour if the responsible person is seen as an intergroup participant (Ellemers *et al.*, 2004). However, social identity theory's treatment of the cognitive processes underpinning behaviours is limited. While this term can be used to contrast critical social-psychological phenomena, it is preferred when employing either theory to ensure that their distinguishing characteristics are preserved (Haslam, 2004). For example, situational influences such as the leader's acceptability and the collective's self-definition have been proposed as factors in the relationship between collective identity and work motivation. According to research, individuals are impacted by conditions that question their membership in the group. Acceptance by the leader is another factor.

According to social identity theory, leadership is viewed as a collective rather than an individual role (Haslam, 2004; Hogg, 2001). In organisations, followers resemble stereotypical group

members more than leaders (Haslam *et al.*, 2020; Platow *et al.*, 1997). Leaders are perceived as typical members of the group, and individuals can strategically present themselves as such to establish their reputation as leaders within the organisation (Haslam *et al.*, 2020). In this perspective, leadership is not seen as an isolated function but as an integrated part of the collective, emphasising the leader's similarity to other group members (Hogg & Terry, 2014). This makes it easier for group members to recognise their authority and accept their decisions.

Social identity theory posits that individuals strive to develop and maintain a unique identity, as their social identities play a defining and informative role in their lives (Tajfel *et al.*, 1979). This theory's fundamental principle is that individuals are inherently motivated to attain a positive sense of self (Martin & Epitropaki, 2001; Tajfel *et al.*, 1979). However, pursuing a positive self-image has been scrutinised (Long & Spears, 1997; Rubin, Badea & Jetten, 2014; Turner, 1999; Turner & Reynolds, 2011). In specific situations, individuals may prioritise resource allocation that enhances their in-group's positive distinctiveness compared to an out-group, even at the expense of their own self-interest (Tajfel & Turner, 1978; Turner & Reynolds, 2011).

This theoretical foundation aims to support the problem raised in this study as to whether the feeling of not belonging to a particular situation or a specific group caused by the IP influences the self-identity of a leader. The decision-making process and the leader's innovative work style may both be directly impacted by self-identity. As a form of self-comparison, social identity theory indicates that impostors seek to label themselves based on traits such as their perceived intellectual status.

This theory forms part of this theoretical construct as it explains the interaction between the impostor's personal and social identities, thus representing who they feel they are (self-perception) and their perceived role in the context of the group (with the organisation context). Social identity theory, therefore, can be used as a construct to identify and forecast the conditions under which impostors see themselves as individuals or group members.

Behaviour is determined by unique attributes and interpersonal interactions (Tajfel *et al.*, 1979). According to the social identity theory, an individual's group behaviour includes interpersonal and intergroup interactions. This idea could explain why individuals who experience the IP believe they have a specific identity in a specific situation. Consequently, they associate themselves with a perceived "outgroup", maintaining that they do not belong in the group portrayed within the specific situation.

Impostors' behaviour is affected by the intergroup identification ideas of members of the group. The impostors' views of their intergroup identification substantially impact their behaviour. The perception of how easily people can move between different groups affects how they behave and how we perceive the constancy and authenticity of the "intergroup status hierarchy" (Martin & Epitropaki, 2001; Tajfel *et al.*, 1979). While seen from the viewpoint of a low-status category, members of the highest category may exhibit similar behaviours (Martin & Epitropaki, 2001). The following section presents a discussion of self-esteem and supporting theories.

2.3 SELF-ESTEEM

A person's attitude toward themselves, whether positive or negative and assessment of their thoughts and feelings make up their self-esteem. Stable self-esteem is unaffected by significant or negative daily occurrences (Kernis, 2013). A person with high self-esteem values himself and sees himself as valuable (Rosenberg, 1979). Individuals with poor self-esteem tend to react aggressively to events they believe to be detrimental to their self-esteem, even if they are not. Self-esteem influences individuals who suffer from IP. Like individuals with low self-esteem, impostors will see themselves positively one day and negatively the next, depending on the situation (Kernis & Goldman, 2003). The following section discusses the self-concept and the intelligence theory as a theoretical framework within this study.

2.3.1 Self-Concept Theory

Self-concept represents an individual's structured ideas, preferences, views and attitudes towards their existence. Self-concept guides the individual towards how they should think, act and fulfil the responsibilities in their life. Individuals' mental images are based on their impressions of their behaviours, skills and distinctive characteristics, known as their self-concept. Self-perception is essential since it influences an individual's motives, attitudes and behaviours (Gray-Little *et al.*, 1997; Rosenberg, 1979). Rosenberg claims the self-concept is a hierarchically organised and interwoven arrangement of self-concept components rather than a disparate collection of these components (Rosenberg, 1979). This view could shift in various ways, including how people react to social interactions.

Self-perception depicts an individual's current self and their perception of themselves. According to Carl Rogers, a humanist psychologist, self-concept comprises three distinct components (Dubey, 2019).

- Self-identity refers to the individual's perception of their characteristics, traits, and qualities. It includes aspects such as their personal values, beliefs, interests and personality traits.
- Self-esteem refers to the individual's evaluation and overall subjective feelings of self-worth. It involves the degree to which a person values and accepts themselves, their level of confidence, and their sense of self-confidence and self-respect. These factors impact a person's self-esteem, including their opinion of themselves, how others perceive them and their social standing (Argyle, 2017).
- Self-efficacy is the belief in one's ability to accomplish tasks and achieve goals. It involves an individual's perception of competence, effectiveness, and capability in specific areas or domains of life, such as academics, sports, or professional skills. Self-efficacy influences motivation, perseverance, and the willingness to take on challenges (Dubey, 2019).

Recognising the disparities in the self-knowledge structure is essential in understanding the overall effects of self-esteem on social functioning. Environment and interpersonal interactions have a substantial influence on a person's self-perception. This is particularly true when it comes to the effect of leaders since they affect how individuals see themselves within social groups and how they perceive others' perceptions of themselves (Prince, 2014). A "clear self-concept" is crucial for maintaining self-esteem. Positivity about oneself is an indication of high self-esteem.

In comparison, a person with low self-esteem struggles with uncertainty, inconsistent behaviour and insecurity with greater intensity than someone with high self-esteem. A standard definition of self-concept is that it is a structured way of thinking that helps us process information about ourselves. This includes our personal memories and experiences, both specific events and general knowledge about who we are (Kihlstrom *et al.*, 1988; Markus, 1977). It is exclusively used to relate to the factors that might affect the self-schema to emphasise a conceptually important distinction between self-knowledge, and thus who a person believes they are, and ego, or how an individual judges themselves (Campbell & Lavalley, 1993).

Research on self-esteem supports the notion that individuals with low self-esteem react to environmental cues with self-relevant consequences (i.e., outcomes that have personal significance and relevance to how a person perceives themselves and their place in the world). Research also shows the impact of statements or information relevant to oneself on one's self-esteem. Individuals with low self-esteem have a poor self-concept and react more cautiously or conservatively to external self-relevant stimuli in social circumstances (Campbell & Lavalley, 1993; Jones, 1973; Shrauger, 1975). Low self-esteem could lead to individuals being more motivated to better themselves. Their emotional responses to criticism are more pronounced for

impostors because of their low self-esteem. Emotional responses to feedback may be formulated in either a weak or strong manner for self-improvement. Individuals prefer positive information and are more responsive to auditory feedback.

According to research, individuals react negatively to unfavourable responses and prefer positive feedback. People with low self-esteem seem to react more emotionally when disparities in their self-esteem are seen. Individuals with low self-esteem dread criticism and are more responsive to their social environments because of their internal feelings (Campbell & Lavalley, 1993). When individuals have low self-esteem, it makes them more vulnerable to feeling agitated, being easily influenced by others, focusing on themselves excessively, and seeking approval and validation from others (Sakhai, 1998). Self-esteem research has shown that those with low self-esteem are more vulnerable to self-relevant social cues than individuals with solid self-esteem. Individuals with high self-esteem have more self-assured personality traits linked to favourable realities and experiences than those with low self-esteem. Low self-esteem makes individuals more aware of their social surroundings (Campbell & Lavalley, 1993).

The malleability of positive self-perceptions cannot adequately explain low self-esteem. Even though individuals with high and low self-esteem react to ordinary occurrences differently cognitively and emotionally, the circumstances may not differ. Positive differences cannot explain why individuals with low self-esteem respond more readily to objective measures, like self-focus, and why their emotions change more often than individuals with high self-esteem (Campbell & Lavalley, 1993). On the other hand, when individuals have unclear, vague, and uncertain ideas about themselves, they may struggle with low self-esteem. Those with low self-perceived expertise, competence or assurance levels are substantially more vulnerable to external influences.

When individuals lack confidence or perceived judgement skills, they react more to the judgements of others (Campbell & Tesser, 1985). Individuals who lack distinct and robust internal ideals of self depend more on external signals containing self-relevant information, making them more susceptible to these signals (Campbell & Lavalley, 1993). According to Baumeister DeWall, *et al.* (2007), individuals with high and low self-esteem have distinct perspectives of themselves. High self-esteem individuals practise self-improvement techniques, including foresight, focusing on their unique talents, strategic moves, and a desire to attract attention. In contrast, self-protective behaviours in individuals with low self-esteem are characterised by a lack of risk-taking, an emphasis on dodging undesirable traits, an unwillingness to engage in strategic manoeuvres, and a lack of desire to draw attention to oneself. Because of this, individuals with low self-esteem

choose self-protective, cautious, and conservative self-presentational methods over those that could lead to negative criticism (Baumeister, DeWall, *et al.*, 2007; Campbell & Lavelle, 1993).

Self-knowledge refers to the collection of ideas that individuals have about themselves, including their qualities and how they see themselves (Campbell & Lavelle, 1993; Markus & Wurf, 1987; Schlenker, 1985). These ideas are often consistent and relevant to their sense of identity. Self-esteem, a self-reflective attitude that arises when individuals evaluate themselves as an object, is a component of the self-schema which is how individuals perceive themselves (Burke, 1980; Campbell & Tesser, 1985). Positive changes in behaviour, attitudes and emotions are generally aligned with higher self-esteem. However, they may not always reflect lasting changes or the deep-seated tendencies exhibited by individuals with low or high self-esteem.

A conventional, orthodox, and self-protective social setting is linked to a vague and ill-defined sense of self (Campbell & Lavelle, 1993). Individuals with low self-esteem have a confused, vague and fluid idea of who they are. Individuals with high self-esteem have distinctive, assured and expressive opinions about themselves compared to those with low self-esteem. Low self-esteem is perceived as fluid, malleable and neutral (Von Bergen & Soper, 1996). Confusion results when individuals with low self-esteem appear less aware of their skewed self-concept than someone with solid self-esteem (Baumgardner, 1990; Campbell, 1990; Campbell & Lavelle, 1993). Individuals with low self-esteem have variable and erratic self-perceptions; they are less confident of their qualities than others (Von Bergen & Soper, 1996).

This theoretical foundation aims to support the problem raised in this study of whether the IP influences individuals' self-esteem and, therefore, their self-concept and perception. This perception will, in turn, influence an impostor's self-confidence and, consequently, their IWB. This theory forms part of this theoretical construct as an impostor's organised beliefs, preferences, viewpoints and attitudes regarding their existence are represented by their self-concept. It is how they view themselves and how they believe they should act, think and respond to others. Self-perception is essential because it affects an impostor's motivations, attitudes and behaviours. Self-preservation and self-improvement appear to drive the behaviour of impostors. Impostors, in particular, strive for high levels of individual accomplishment, which originates from a need to justify their perceived illusions of intellectual giftedness and, as a result, boost their self-esteem (Langford & Clance, 1993). As a result, impostors avoid circumstances that may result in unfavourable feedback regarding their competency (Dudău, 2014; Ross & Krukowski, 2003).

As seen in impostorism, vague, unclear and poorly defined self-concepts are signs of low self-esteem. Low self-perceived experience, competence or confidence make impostors far more

susceptible to external influences. According to the research, when someone lacks confidence or appears to lack judgement abilities, they tend to adhere more to other individuals' opinions (Campbell & Tesser, 1985). Individuals who lack clear and strong internal ideals depend more on external signals that convey information about themselves and are, therefore, more vulnerable to these external influences (Campbell & Lavalley, 1993). Individuals with solid self-esteem see themselves differently from those with poor self-esteem. Self-assured individuals often work on their abilities, emphasising their unique qualities, making deliberate actions, and wanting to stand out (Baumeister, DeWall, *et al.*, 2007). In contrast, with impostors, self-protective behaviours are characterised by a lack of risk-taking, emphasis on avoiding undesirable traits, an unwillingness to engage in strategic manoeuvres, and the need to prevent drawing attention to oneself. Because of this, these individuals choose self-protective, cautious, and conservative self-presentational methods over self-demeaning ones (Baumeister, DeWall, *et al.*, 2007; Campbell & Lavalley, 1993).

2.3.2 Implicit Theory of Intelligence

According to social and developmental psychology, an individual's implicit theory of intelligence is connected to their fundamental underlying views regarding the malleability of intelligence or talents. An individual's general ideas about whether intelligence is a fixed attribute (entity belief) or a flexible attribute that may be developed via learning (incremental belief) are known as implicit intelligence beliefs.

The term "implicit theory of intelligence" is used in social and developmental psychology to describe a unique core idea about intelligence development or talents. This theory explains the belief that talents are inherent features of an individual (Park & Kim, 2015). This theory claims that hard work and devotion may improve intelligence and potential. Analysing a person's motivation and behaviour when pursuing a goal might reveal their attitude toward intelligence. However, their disposition does not always determine an individual's task efficiency. Individuals may either support or disregard the idea that their talents and traits are fixed (Park & Kim, 2015).

Dr Carol Dweck and her colleagues created the phrase "implicit theory of intelligence" in social and developmental psychology to describe a person's core beliefs on whether intelligence or talents may change (Dweck, 2013). Dweck and her colleagues examined how individuals subconsciously assess their intelligence and abilities based on their interactions with others and their perceptions of their environment. Their findings revealed that these assessments impacted an individual's goals, motivations, behaviours, and self-esteem. Highly motivated individuals

flourished in challenging environments, whereas less motivated individuals quit or failed to complete tasks (Diener & Dweck, 1978). This study suggests that individuals may be categorised into two groups with contrasting theories of intelligence, either entity or incremental theories. These ideas influence how well each person performs (Dweck, 2013).

The entity theory of intelligence indicates that a person's talents are fixed, unchangeable features (Plaks & Stecher, 2007). For entity theorists, a higher perceived likelihood of mastery equates to a higher perceived competence to complete a task and perceived knowledge is limited when perceived competence is low (Park & Kim, 2015). Studies show that on consecutive examinations of the same ability, individuals with an entity theory perspective do worse than those with an incremental theory perspective (Park & Kim, 2015).

In contrast to the entity theory, the incremental method suggests that intellect and skill are malleable characteristics that may be acquired via effort and labour. Even if an individual's initial capacity to do a task is limited, incremental theorists believe mastery may be achieved. Because of the promise of mastery, there is a perceived likelihood of success, contributing to an individual's inner drive to accomplish a task (Park & Kim, 2015). While many individuals who share this viewpoint on intelligence do not believe that anybody can become a master in their field, they recognise that even a master takes years of hard work to become who they are (Dweck, 2007).

Attributing and dealing with failure are inextricably intertwined. Individuals who use an incremental approach blame failure on a lack of knowledge, a flawed perspective or their efforts. Because these issues may be solved with effort, incrementalists are motivated to nurture an intellectually progressive environment. They are also more willing to take proper corrective measures. Those who believe in fixed intelligence attribute failure to incompetence (Hong *et al.*, 1999). This belief has an impact on independent research. Individuals with an incremental mindset practise self-regulated learning by absorbing information and seeking solutions to problems (Monroe & Malle, 2010). As a result, incrementalists are better at self-directed learning, which increases productivity in setting learning objectives and building cross-disciplinary connections, allowing for more in-depth data processing (Dweck & Master, 2012).

Most incrementalists have a consistent sense of self-value. When faced with defeat, they do not doubt their intellect but are inquisitive and study difficulties (Dweck, 2013). Those who believe that intelligence is a fixed attribute often blame their failures and the need for effort on a lack of competence. As a result, it is unlikely that they will continue such behaviours (Hong *et al.*, 1999). These individuals feel that exerting effort will reduce their IQ because intelligent individuals do not need effort (Blackwell *et al.*, 2007). They will demonstrate restraint in the presence of severe

criticism, which they will almost definitely see as a personal attack on their talents, and in situations where they believe they will succeed. These individuals' feelings of self-worth may be eroded when they fail (Dweck, 2013).

According to research on the implicit theory of intelligence, those who perform well academically early in childhood and are often praised for their brilliance are more prone to assume that their intellect is fixed. They may have had fewer setbacks and are less used to making mistakes (Dweck, 2013). Individuals who believe in entity perspectives have lower self-esteem than those who believe in incremental notions (Robins & Pals, 2002).

A person's implicit assessment of intellect may aid in predicting future performance, particularly when confronted with life upheavals often associated with difficulty, such as changing jobs (Blackwell *et al.*, 2007). According to studies, those with a growth attitude had higher grades and performance and a more favourable opinion of the importance of work than those with a fixed viewpoint (Blackwell *et al.*, 2007; Cury *et al.*, 2006). Fixed mindsets may provide fewer reasons for possibly harmful performance than individuals with inadequate ego-salvation abilities (i.e., skills or capabilities that help individuals protect or enhance their sense of self, promote well-being, or find personal fulfilment) (McCrea & Hirt, 2001). Individuals with learning objectives are more internally motivated and pragmatic when faced with a difficult task (Cury *et al.*, 2006).

More research in intelligence-related domains has resulted in an entity-based approach instead of an incremental one. As a manifestation of a more significant entity or mentality, intelligence can provide much information about a person's environment and self-perception. Those with entity views believe all traits, except intelligence, are intrinsic and unchangeable. In contrast, those with incremental views believe that characteristics may be changed. Increased stereotyping, prejudiced rigidity and conflict resolution issues are all linked to entity beliefs. Individuals with an incremental viewpoint are associated with more sensitive beliefs and are more flexible in conflict resolution (Dweck & Ehrlinger, 2006; Levy *et al.*, 1998).

Individual growth is highly influenced by the IP and the implicit intelligence theory, notably in performance and mental health (Dweck, 2013). Individuals who believe in the entity theory think their intelligence is unchangeable and they have no control over it. Individuals with a growth mentality think that intelligence may change over time (Dweck, 2013); fixed attitudes are counterproductive to individuals' efforts to achieve their goals (Murphy & Thomas, 2008). A growth mentality is also seen as adaptable (Dweck, 2013); individuals believe their intellects and talents can change over time (Dweck *et al.*, 1995). According to the previous reasoning, incremental intelligence is highly correlated with individuals' accomplishment behaviour (Kumar & Jagacinski,

2006). Entity theorists and impostors have the same fear: impostors fear that others may find they are less intelligent than they thought, which was only a problem when individuals felt their skills were fixed (Kumar & Jagacinski, 2006; Xu, 2020)

This theoretical foundation underpins the problem raised in this study, whether the person with IP considers that they can manage and change their impostor tendencies. Their view on whether intelligence is either flexible or fixed may play a crucial role in the behaviour of the impostor, as it refers to a person's core, underlying ideas regarding the malleability of intelligence or talents; this theory is a component of this theoretical construct. Perfectionism and the impostor issue are complicated (Lee *et al.*, 2020). Perfectionism provokes two distinct reactions in the IP (Clance & Imes, 1978). Impostors feel that everything they do must be flawless and only accept help on rare occasions. An impostor may delay acting out of fear of not meeting the required high standards, over-plan, and spend significantly more time on work than is required in order to look skilled and avoid unfavourable judgements of their skills.

The implicit theory of intelligence impacts a person's ambitious tendencies towards perfectionism. According to this theory, as with this notion of impostors, individuals are driven by goals and rely on their assessment of their mastery to obtain them (Dweck & Elliot, 1983). Individuals seek task engagement goals to improve their abilities. Self-improvement goals are primarily focused on protecting, enhancing or maintaining one's self-esteem or self-image (Nicholls, 1975). Impostors seek to achieve performance objectives to look competent and avoid unfavourable judgements of their abilities (Dweck, 2013). In contrast to impostors, those who feel they can develop and broaden their knowledge look for obstacles to overcome to achieve mastery. Those who believe their skills are unalterable will accept and endure misfortune. They will not be questioned about whether they have confidence in their abilities. When individuals lack confidence in their talents, as with the IP, they may avoid, postpone or even cheat in potentially difficult circumstances. These activities may lead to learned helplessness (i.e., when individuals experience a series of negative events or failures that they perceive as uncontrollable, they may develop a belief that they have no control over their circumstances). As a result, they may stop trying to change their situation, even when there are opportunities, which stifles intellectual development (Blackwell *et al.*, 2007; Dweck, 2013).

According to Imes, those who suffer from the IP tend to be raised in homes that place great importance on achievement (Clance & Imes, 1978). Parents who provide conflicting signals to their children, such as alternate praise and reprimand, risk instilling false views in their children. Acceptance, affection and deservingness are all concepts that may sometimes be misinterpreted.

Achievement becomes a metric for determining a person's worth (Clance & Imes, 1978). Failure anxiety is common among so-called overachievers (Leggett, 1985). Many individuals who believe that failure reflects their intelligence may lie about their accomplishments to retain their self-esteem and sense of competence, which they link with their performance. Those who understand the value of their efforts do not act this way (Chan *et al.*, 2016). The following section presents a discussion of decision-making self-efficacy and supporting theories on this topic.

2.4 DECISION-MAKING SELF-EFFICACY

The word "self-efficacy", coined by Albert Bandura in the 1970s refers to a person's belief in their ability to do the actions necessary to achieve the desired performance results. It assures one can complete a job under specific circumstances (Schwarzer & Luszczynska, 2008). Self-efficacy impacts every aspect of human behaviour, including motivation, behaviour and social environment.

Self-efficacy influences individuals' problem-solving and decision-making abilities by influencing their beliefs about their capacity to influence outcomes (Wuepper & Lybbert, 2017). Individuals with low self-esteem could perceive things as more complex. In contrast, those with solid self-efficacy might perceive things as more straightforward. When individuals participate in an activity for which they lack self-efficacy, they become inconsistent and erratic; this may result in significantly increased stress. The following section discusses the social cognitive theory and the conflict decision-making model to support the theoretical construct of decision-making self-efficacy as a research construct.

2.4.1 Social Cognitive Theory

The social cognitive theory, applied to psychology, education and communication, holds that how individuals learn is strongly tied to their ability to comprehend other individuals in social interactions, experiences and the influence of outside media. This theory discusses how individuals' experiences, others' behaviours and environmental factors affect their behaviour. Objectives, outcome expectancies, self-efficacy and socio-structural factors are the four components of social cognitive theory. The social cognitive theory as a component of this theoretical construct is examined in this section.

Self-efficacy significantly impacts how a person handles goals, efforts and challenges (Luszczynska & Schwarzer, 2005). This theory emphasises the importance of social experience and observational learning in personality formation. This expression also refers to an individual's

valuation of their social milieu (Bandura, 1977). According to social cognitive theory, the social behaviours and cognitive processes of others impact a person's actions and feelings. Self-efficacy is a crucial component of this theory since it is influenced by external knowledge and self-esteem and determines the outcomes of actions.

Self-efficacy, or the belief in one's capacity to carry out a task, is a crucial idea in social cognition. Social learning is influenced by individual success or failure in dynamic group interactions. It promotes the development of emotional and practical abilities and a realistic self-perception and social tolerance. "Social learning theory" describes how talents are developed solely or mainly inside a social group (Ormrod, 1999). This theory proposes that a person's awareness attainment is correlated with their perception of the social interactions, events and external media effects of others. The quantity of knowledge a person acquires is strongly related to their view of others due to social contacts, experiences and media influences. The link between their outcome expectations and effectiveness judgements impacts their behaviour (Bandura, 1986; Bryant & Oliver, 2009).

Holt's social cognitive theory, developed before Bandura's, supports the social learning and imitation theory. This theory states that incentives, signals, emotions and rewards aid learning (Holt, 1933). One of the reasons is social motivation, which includes imitation. Imitation connects an action to a cue that defines when and where it should be carried out. By repeating these actions, the observer reinforces the acquired behaviour and earns a reward (Yilmaz, 2013). As a result, a model's behaviour is determined by whether it receives a positive or negative response. Miller and Dollard (1941) contend that if a person is driven to participate in a particular activity, prolonged observation will result in adopting that behaviour.

Self-efficacy is the foundation of Bandura's "social cognitive theory". It emphasises the value of social interaction and subtly delivers teaching in character formation. The central tenet of "social cognitive theory" is that other persons' social behaviours and cognitive processes impact an existing structure and responses. The social cognitive theory requires a similar degree of self-efficacy since external encounters and self-perceptions significantly impact the frequency of occurrences (Bandura, 1988; Bandura & Walters, 1977; Mischel & Shoda, 1995).

This theory examines how individuals understand their experiences, considering external influences and focusing on how these opinions are formed and maintained through time. Success and failure are correlated with a person's evolving self-perception and interpersonal relationships. According to this theory, individuals with greater self-efficacy are more motivated to see

challenging professions as possibilities rather than impediments. This perspective contends that self-concept is learned, structured and dynamic (McAdam, 1986).

Bandura developed and researched the idea of social learning. Bandura and his associates carried out a series of tests between 1961 and 1963 as part of the “Bobo doll experiment”. This study aimed to discover why and when children engage in aggressive behaviour and show how vital modelling is in learning new behaviours. These studies supported Bandura’s seminal 1977 study on learning behaviour, built on Miller and Dollard’s findings (Hollis, 2019). According to Bandura’s 1977 essay, these trials demonstrated a clear correlation between perceived self-efficacy and behavioural change (Bandura & Walters, 1977). Bandura released an expanded and renamed version of his theory in 1986. Bandura stated in this study that individual, behavioural and environmental variables impact human conduct, and this experiment underlines the crucial role of cognition in encoding and executing behaviour (Bandura, 1986).

It was found that individuals had developed unique neural processes that allow them to symbolically and directly acquire information and abilities (Bryant & Oliver, 2009). According to social cognition theory, individuals obtain knowledge through four fundamental capacities: symbolising capacity, self-regulation, self-reflective potential and vicarious experience (Bryant & Oliver, 2009). Individuals rely on their ability to communicate symbolically. They are affected by external events in both direct and indirect ways. Individuals may grasp information symbolically, construct alternative replies, and assess anticipated consequences instead of learning through a lengthy trial-and-error process (Bandura, 2001). Individuals develop skills, resources, self-efficacy and other benefits. They can self-regulate their objectives and activities. Individuals’ capacity for self-control also guides them. The ability to reflect on oneself is usually a determining factor in one’s achievement when ambitious goals are set and pursued (Bandura, 2001).

Individuals can be identified by their capacity for self-reflection. By continuously evaluating the appropriateness and validity of their opinions in diverse social and logical contexts, individuals may develop new ideas, change their thinking and behave correctly. According to social cognitive theory, learning happens when the viewer has a high self-efficacy and the observer and the model have strong identities (Bandura, 2001). Individuals’ self-efficacy is confidence in their ability to learn a specific skill. Self-efficacy beliefs influence behaviour via cognitive, motivational, and emotional mechanisms (Bandura, 2001).

Bandura and his colleagues found that an individual’s objectives, behaviours and worries greatly influenced their perceived self-efficacy. Strong self-efficacy enables individuals to overcome barriers and recover swiftly from failures. Individuals with poor self-efficacy lack confidence and

believe they cannot do things well, particularly in dealing with complex activities. Consequently, self-efficacy is crucial for behaviour performance. Observers with self-assurance are further expected to participate in observational learning events (Bandura, 1995).

According to Bandura, variations in self-efficacy are connected to radically divergent worldviews. The belief that one has control over their life and that their decisions and actions are known as self-efficacy. Those with poor self-efficacy may feel powerless over their life. A person with high self-efficacy will often blame a lack of time or resources when they cannot complete a task. When a person has low self-efficacy and performs poorly at work, they are more likely to blame their incapacity on their knowledge and talents. Therefore failure reduces self-efficacy, whereas success boosts it (Bandura, Pastorelli, *et al.*, 1999).

According to psychologist Erik Erikson, excessive praise and condescending encouragement falsely make children perceive their achievements. Furthermore, their collective ego identity only gains meaningful strength if persistent and ongoing recognition is provided (Erikson, 1993). This is like impostors whose self-esteem is shaped by their parents. These impostors were raised in a family where success was valued highly. Similarly, contradictory parental messages, such as alternating praise and criticism, led them to develop a false sense of self (Clance & Imes, 1978).

Understanding the connections between these ideas is required to comprehend the idea of decision-making self-efficacy. Understanding how individuals make decisions has led to studies in various fields. Most decision-making research occurs outside psychology (Keren & Wu, 2015). Decision-making theory is sometimes broad, ill-defined, varied and chaotic (Buchanan & O Connell, 2006; Kugler *et al.*, 2012; Myburgh, 2010). The research on decision-making encompasses multiple fields, including anthropology, business, politics, psychology, and sociology (Payne, 1997).

The decision-making concept seeks to collect and systematise information on criteria for a variety of possibilities systematically and thoroughly (Gabrielsson & Politis, 2011; Garvin & Roberto, 2001; Myburgh, 2010). Research indicates that intelligent decision-making procedures provide more desirable outcomes than haphazard ones (Dean Jr & Sharfman, 1996; Frisch & Clemen, 1994; Myburgh, 2010). The intelligent decision-making process includes analysing the situation, weighing the options, contemplating commitment, and standing one's ground in the face of criticism and resistance (Milkman *et al.*, 2009). Haphazard decision-making may involve relying on biases, intuition or incomplete information rather than considering all relevant factors or evaluating potential outcomes. Unintelligent decision-making can be impulsive, based on limited perspectives, or driven by emotions rather than a systematic situation assessment and may be

difficult to justify. Defined as an organised set of interrelated actions, decision-making commits a person to a path of action that generates positive or negative outcomes (Battiston *et al.*, 2003; Milkman *et al.*, 2009; Yates *et al.*, 2003). Self-efficacy, thus, impacts the decision-making process within these procedures (Wood *et al.*, 2000).

Although several aspects of the decision-making process are closely linked, there may be significant time gaps because individuals may need to acquire the necessary information to help them analyse potential alternatives (Bandura & Jourden, 1991; Wood *et al.*, 1990). Hasty, uninformed judgements impact later decisions because the consequences of the decision may not be properly thought through, necessitating frequent changes which will be disruptive (Bandura, 2013). However, good management decision-making considers a range of choices, reflecting the dynamic nature of such decision-making. In addition, exceptional management decision-making represents a systematic and comprehensive process that involves incremental progress building from one effective decision to the next until a final efficacious solution is reached (Bandura & Jourden, 1991; Wood *et al.*, 1990).

This operational aspect of decision-making highlights the time-dependent consequences and complexity of component elements that influence the efficacy of future management decisions and choice-making (Gabrielsson & Politis, 2011; Hough & White, 2003; Myburgh, 2010; Papadakis & Barwise, 2002; Schneider & Barnes, 2003; Wood *et al.*, 1990; Wood *et al.*, 2000).

Bandura (2006) argues that the social cognitive theory offers benefits over previous theories of effective managerial decision-making. It is not bound by the notion that corporate decision-making procedures include sequential search, assessment and selection phases. The “social cognitive theory” examines social processes, including the reciprocal causation between a person’s cognitions and other traits, behaviour and environment.

According to this theory, management decision-making is an interactive process influenced by various elements that produce reciprocal effects between individual components, decisional behaviours and environmental outcomes. Furthermore, the social cognitive theory recognises self-regulatory components as part of using human abilities in managerial decision-making. Social cognitive theory is beneficial because it provides a straightforward conceptual framework for distinguishing material outcomes and assessing human variables’ interdependencies and cumulative impacts, decision-making processes and environmental restrictions (Myburgh, 2010). Bandura’s social learning theory emphasises observational learning, imitation and modelling. His idea, the reciprocal causation model, as illustrated in Figure 2.2, assumes an ongoing interaction between actions and individual factors.

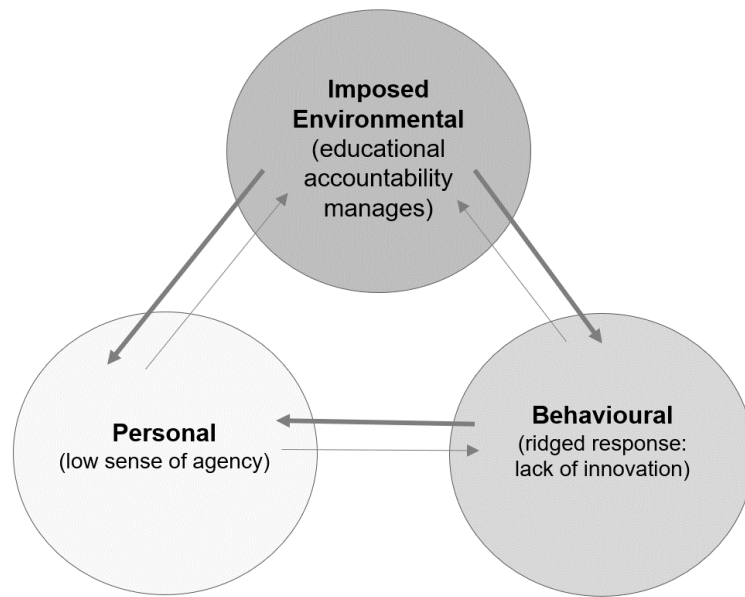


Figure 2.2: The Reciprocal Causation Model

Source: (Bandura, 1986)

Bandura's theory explores the fundamental concepts through a model of triadic reciprocal causation (Bryant & Oliver, 2009). This model shows how a learner's commitment to a behaviour affects their ability to imitate it. The learner's ability to succeed is influenced by how they react to engaging in certain behaviours and their surroundings. While most individuals believe that one's upbringing influences behaviour, the social cognitive hypothesis is a learning theory (Lent, Brown & Hackett, 2000). Individuals learn by observing others in a typical triadic partnership, with territory, behaviour and cognition contributing to personal growth. Each observed behaviour has the potential to change an observer's perception. Similarly, the environment in which a person is reared might impact later behaviour (Bandura, Freeman, *et al.*, 1999).

The influence of historical circumstances on decision-making processes has been noted by some academics using social cognitive process theories. Decision-process theories, including Janis and Mann's Conflict Mode, Forgas' Affect Infusion Model, and Payne, Bettman, and Johnson's Adaptive Decision-Maker Model, contend that humans have a variety of decision-making strategies depending on the task, the circumstance, and individual differences (Forgas, 1995; Janis & Mann, 1977; Payne, 1997). The underlying principles of these theories are that individuals choose how to make decisions depending on various criteria and that the application of contingent decision strategies is an adaptive response to the demands of a situation. Furthermore, these models propose that decision-making relies on finding a balance between limited attentional

resources and goals. This study takes a social-cognitive approach to decision-making, viewing it as an interconnected and interactive process influenced by both the organisational context and the decision-makers variable concerns (Bandura & Jourden, 1991; Myburgh, 2010).

The most crucial task of a leader is making decisions. Despite the availability of information and good intentions, intelligent and accountable leaders generate inefficient decision-making processes (Certo *et al.*, 2008; Lovallo & Kahneman, 2003). Amid information overload and competing aims and objectives, individuals in leadership positions make decisions for organisations and groups. Without a clear motivating factor, critical thinking and the positive impact of social influence on decision-making decline (Myburgh *et al.*, 2015; O'Connor & Arnold, 2001; Wood *et al.*, 2000). Therefore, these situations may surpass the leader's cognitive capacity, demanding deliberate cognitive effort to meet the demands placed on these individuals (Ganster, 2005; O'Connor & Arnold, 2001; Payne, 1997).

Considering their ubiquity, self-efficacy beliefs as a possible effect on managerial decision-making have not been studied to any great extent (Hiller & Hambrick, 2005). This component of self-efficacy research has been largely ignored, resulting in self-efficacy ratings representing worldwide or general capability that bear little similarity to an individual's success on specific tasks (Myburgh *et al.*, 2015). Previous studies have revealed that self-efficacy impacts achievements on complicated decision-making tasks (Arenas *et al.*, 2006; Bandura, 2006).

The act of making decisions does not guarantee that individuals will exert the necessary effort to pursue their chosen path and overcome challenges along the way (Bandura, 2009). However, individuals' self-efficacy beliefs can influence their perception of their decision-making abilities, motivating them to take action. Leaders can enhance their self-efficacy by developing their problem-solving skills and having the freedom to seek collaboration, acquire the necessary qualities, regulate disruptive thoughts, implement action plans, and make accurate assessments (Myburgh *et al.*, 2015). The concept of self-efficacy beliefs in business decisions, rooted in the ability to regulate one's thoughts and actions, can provide descriptive and predictive ability. It considers the expectation of success and can guide individuals in assuming decision-making responsibilities with a certain level of performance (Myburgh *et al.*, 2015).

Management depends on a methodical process of acquiring vital information and analysing options to pick an optimal course of action. This involves choosing mentally challenging tasks to meet high standards of judgment and decision-making. The successful use of readily available resources and careful consideration of self-efficacy beliefs regarding the ability to explore, analyse and incorporate crucial information indicate effectiveness in this process (Wood *et al.*,

2000). These viewpoints on the exploratory search and inferential efficacy are connected to a more rational, methodical and complete decision-making process that promotes the achievement of the organisation's objectives (Myburgh *et al.*, 2015).

This theoretical underpinning supports the issue of IP posed in this study, namely, whether impostors may be identified by their capacity for self-reflection. Individuals may develop new ideas, change how they think, and behave appropriately by continually evaluating the validity of their decisions in various social and logical contexts. It supports the idea that the IP affects a person's sense of self-efficacy and decision-making capacity. The social cognitive theory, which seeks to comprehend the context of social interactions and experiences, is a component of this theoretical framework.

According to social cognitive theory, impostors' goals, anticipated outcomes, degree of self-efficacy and socio-structural variables influence their behaviour. Individuals with high self-efficacy are more likely to weigh a task's pros and drawbacks before deciding on the best action. This theory examines the consequences of personal encounters, interpersonal relationships and environmental factors.

Those with high self-efficacy frequently put enormous effort into responding to obstacles, whereas those with low self-efficacy grow irritated and may disengage from the task. This is typical of impostors' behaviour, in which they either over-prepare for a job or avoid it entirely. Excessive preparation and procrastination are two possible impostor cycle behaviours that could explain these actions. Getting the desired outcomes may require more effort when someone over-prepares a task. There will be a brief sense of pride and relief just before the work is completed. Constructive feedback is frequently dismissed before the task is completed. Procrastination quickly devolves into a hopeless attempt to attain the goal (Clance & Imes, 1978).

As understood in this segment, social cognitive theory indicates that a person's knowledge acquisition component is closely related to social interactions, attitudes and external influences (Luszczynska & Schwarzer, 2005). As a result, the relationship between outcome expectancies, or the belief that their actions will produce specific results, and effectiveness perceptions, or the belief that their actions will achieve the intended impact, drive the behaviour of those affected by the IP (Bandura & Wood, 1989). This theory may, therefore, be used to determine whether impostors are impacted by both external and internal elements, including cognition and symbolic processing. Social self-efficacy can be operationalised using cognitive and behavioural self-efficacy (Schwarzer & Jerusalem, 1995).

Self-efficacy has a considerable negative link with the IP. Individuals afflicted by the IP will have low self-efficacy, leading to work difficulties regardless of their talents and skills and hindering decision-making processes. Supportive organisations may alleviate some of the challenges associated with low self-efficacy by minimising the impact of the IP on behaviour (McDowell *et al.*, 2015).

2.4.2 Conflict Model of Decision-making

The conflict decision-making model is discussed in this section as a part of the theoretical framework. When competing alternatives include danger, regret, or a challenge to one's life values, personal doubt about the right course of action is defined as decisional conflict. The conflict theory of decision-making acknowledges that the decision-maker must select from various possibilities, some of which may have positive and negative effects. Additionally, it acknowledges the decision-maker as a conscious thinker.

Individuals make minor and major decisions throughout their lives. Every decision made throughout life has an effect, and the decision-maker is responsible for accepting the consequences arising out of the decision (Miller & Byrnes, 2001). Making the right decisions may make an individual's life easier and more contented while making the wrong ones can make life challenging and result in a wretched existence (Narangerel & Semerci, 2020).

A succession of subsequent phases can be used to describe a decision-making process. The first step is deciding to recognise a circumstance that requires a decision. The individual uses a specific way to study the issue, generates several options from the assessment process, weighs the possible effects of each alternative, and then moves on to the choosing process. The process is completed after the person determines what to do in this situation (Alver, 2005).

Decision-making is not as simplistic as it may seem since several variables come into play (Narangerel & Semerci, 2020). While each person's decision-making process appears to be the same, each person's process is distinct. This is because everyone has a unique way of making decisions and approaching problems. Individual decision-making style affects decisions and influences an individual's strategy (Harren, 1979). Janis and Mann (1977) posit that decision-making entails conflict and tension. They contend that excess or lack, linked to information search, assessment and decision-making processes, is a crucial driver of the individual's incapacity to make a wise choice. These notions are clarified in their proposal of a descriptive decision-making process model. This model asserts that two worries cause stress: first, the concern about the losses an individual may have due to their decisions throughout the decision-making process,

and second, the concern over the personal losses that could damage self-esteem (Janis & Mann, 1977). This model is considered a model of cognitive evaluation with similar characteristics to other models of cognition, such as those developed by Bandura (1977) and Lazarus and Folkman (1984). These models evaluate human resources to satisfy individual demands and assess the requirements of a specific environment. According to Janis and Mann's (1977) model, time is the resource that has the most significant influence on how decisions are made. According to this model, an individual's decision-making conflict pattern depends on the presence or absence of three contextual factors, particularly the knowledge of a severe risk if nothing is done. Thus, being aware of the circumstances, the hope of receiving a suitable alternative, and the conviction that there is enough time to learn about a problem, the individual considers and chooses the best alternative. The model is characterised by a thorough search for information, carefully assessing all plausible explanations, and a deliberate, non-impulsive decision-making process, allowing one to define the model as adaptive (Janis & Mann, 1977).

Many decision-making researchers now embrace the Janis and Mann paradigm. It has sparked interest in understanding how decisions are made when faced with dangerous situations (Janis & Mann, 1977; Keinan, 1987; Lazarus & Folkman, 1984). The significance of stress in this model is highlighted as a factor that distorts information and leads to predetermined, stereotypical behaviours that do not contribute to a constructive resolution of conflicts. Decision-making frameworks have emphasised the need for thorough investigations into the role of stress (Folger *et al.*, 1984). For example, arguments often trigger egocentric biases, but the approach presented by Janis and Mann offers a way of mitigating such biases and ensuring accurate judgement (Weitzman & Weitzman, 2000).

The Flinders Decision-Making Questionnaire was first made available in 1982 by Mann (1982). The results of psychiatric studies using measurements from this questionnaire have linked defensive avoidance and hypervigilance scale scores to the severity of various issues (Radford *et al.*, 1986). Similar studies have examined the association between procrastination scale scores from this questionnaire and a tendency to dwell on the past or the future rather than current plans of action (Kuhl, 1985). This questionnaire has also assessed individuals' tendency to use different decision-making approaches throughout their careers. Defensive avoidance and hypervigilance, two coping strategies that are usually non-vigilant, have been connected with low academic performance (Beswick *et al.*, 1988). Additionally, a tenuous connection exists between the Flinders questionnaire and confidence in one's decision-making ability (Burnett, 1991). Although the connection between self-esteem and decision-making has received minimal attention in research, it is known that using decision-making productively is linked to a subject's positive self-

image, while using non-productive criteria is linked to a subject's negative self-image (Burnett, 1991). Individuals' vigilance patterns and self-satisfaction levels have been empirically linked (Fletcher & Wearing, 1992).

The Janis and Mann approach admits that individuals tend to use some coping strategies more frequently than others which may vary depending on cultural conditions. Decision-making tendencies tend to be individual rather than cultural (Mann *et al.*, 1998). However, the authors speculate that cultural differences may also be reflected in the participants' feelings of self-worth and confidence in decision-making. According to their predictions, individuals would perceive themselves as more capable decision-makers in Western, individualist societies than in Asian countries, which focus more on group decision-making and the collective (Mann *et al.*, 1998). They contend that Western societies provide individuals more freedom in making decisions and require greater accountability from individuals for the repercussions of their decisions. The concept states that internal conflict also affects a person's decision-making process (Janis & Mann, 1977). However, research indicates that individuals typically experience external conflicts with other people in addition to their internal conflicts. In such circumstances, the person's ability to make decisions is constrained not just by their personal biases but also by the objections of other individuals. Conflict-coping techniques can affect an individual's decision-making processes under these external influences (Janis & Mann, 1977; Thomas, 1974).

Many researchers have described the decision-making process as acquiring relevant data, analysing it and choosing the best information for the circumstance. A methodical approach to reasoning characterises decision-making as a deliberate process that accumulates knowledge about the situation and uses it to produce the desired result (Rhodes & Alfandre, 2007). When several scenario options present themselves, individuals will use a cognitive and behavioural process to address the problem (Dietrich, 2010). Making decisions should aim to solve the issue. Options are assessed when the choice is being made. The choice that will assist an individual in attaining their goal effectively is picked. Therefore making decisions is a process rather than a single action (Narangerel & Semerci, 2020). Academics have established several models and theories to describe the decision-making process. Arousal theory was the foundation of the decision-making theory put forward by Janis and Mann (1977). They asserted that the selection procedure may have produced difficult circumstances. Conflicts between individuals might result from difficult circumstances. This is particularly true when alternatives contain potential grave flaws, raising arousal. A person's arousal rises until a decision is made and then falls. Conflict involving a person's decisions can either be positive or negative. The conflict may be an excellent stimulus or negative, depending on the stress levels of the decision-maker. The difficulty of

making decisions shows that it is a demanding action. The decision-choice maker may bring this stress to bear, causing objective, subjective or material harm (Janis & Mann, 1977).

Individuals struggle and go through psychological upheaval when considering the implications of their current path of action. Conflict theory provides patterns for decision-maker behaviour and coping strategies throughout complicated decision-making processes. According to the conflict decision-making model, individuals can display four distinct decision-making behaviours (Janis & Mann, 1977) as described below:

- Watchful decision-making style: Individuals who make wise choices research the situation before deciding. They will not decide without carefully weighing all of their options. Intelligent decision-makers are determined that a solution will be found and consider all options before deciding;
- Buck-passing decision-making style: This strategy frequently entails handing over all decision-making to external parties to avoid passing judgement (Narangerel & Semerci, 2020);
- Procrastination decision-making style: Procrastinators frequently attempt to put off making decisions. Although decision-making duties are usually acknowledged, the strain of the process causes delayed decisions or may result in decisions not being made at all; and
- Hypervigilance decision-making style: Individuals who exhibit panic-like behaviour when making decisions are under tremendous stress and time constraints. In the end, they frequently make snap judgements and provide impromptu solutions. In other words, a person may choose a worse course of action if they lack confidence in their ability to address current issues and believe there is insufficient time for a thorough inquiry.

Following a plan involves finishing the task and reducing stress without considering the outcomes of various decision-making options. Therefore, when used realistically, it will generate solutions to a problem (Narangerel & Semerci, 2020)

Decision-making styles are built on the patterns Janis and Mann saw in decision-makers' actions under pressure. Several scholars have conducted empirical studies on the causes and impacts of decision-making styles. Deniz (2006) examined the relationship between managing stress and making decisions. The study's findings suggest that students with attentive decision-making styles are more adept at coping mechanisms than those with procrastination, hypervigilance and buck-passing types (Deniz, 2006).

This theoretical foundation provides a means of evaluating the problem raised in this study as to whether the internal conflict caused by the IP influences how impostors make decisions. The impostor may experience decisional conflict, described as a person's uncertainty about the best course of action when the choices involve risk, regret or a test of their core values. This theory forms part of this theoretical construct, as the conflict theory of decision-making posits that the decision-maker must select from a range of alternatives, each of which might have favourable and unfavourable effects. Furthermore, it recognises the decision-maker as a conscious thinker.

Impostors suffer from internal conflicts in terms of their self-identity. In such cases, the impostor's decision-making abilities are limited by their prejudices and others' opinions. Conflict-coping strategies may describe how impostors make decisions when faced with these outside pressures (Janis & Mann, 1977; Thomas, 1974). The model explains how internal conflict could influence a person who experiences the IP's decision-making process (Janis & Mann, 1977). The following section presents a discussion of IWB and supporting theories.

2.5 INNOVATIVE WORK BEHAVIOUR

The theories of self-regulation and goal-setting that underpin IWB as a research construct are covered in this section. To be competitive, organisations must continuously improve their goods, services and ways of operation. Consequently, innovation has been the focus of many studies. Some studies concentrate on managing corporate, workgroup and individual innovation (King & Anderson, 2002). Individual efforts are required to maintain innovation and progress (Janssen, 2000). This concept is evident in scholarly studies on creativity and research on related management concepts like overall quality management and corporate venture capital (Chua *et al.*, 1999; De Jong & Den Hartog, 2008; McLoughlin & Harris, 1997).

Innovative Work Behaviour encompasses various behaviours related to generating, implementing and producing new ideas (De Jong & Den Hartog, 2008; Farr & Ford, 1990; Janssen, 2000; Scott & Bruce, 1998). It focuses on practical utility rather than pure creativity, aiming to generate innovative results (Amabile, 1988). Researchers have found that IWB relies on the level of creativity of individuals.

Creativity may be viewed as a distinguishing trait of IWB at the beginning of the innovation process, typically called the "idea generation" stage (West *et al.*, 1990). During this stage, individuals or teams engage in activities to generate new and innovative ideas (De Jong & Den Hartog, 2008). IWB is intended to benefit the organisation. By engaging in IWB, individuals

contribute to their workplace's overall innovation and growth, helping to drive competitiveness, adaptability, and success in a rapidly changing business environment.

Theoretical work on IWB differentiates several properties commonly linked with various innovation process stages (Scott & Bruce, 1994). Most theoretical work on IWB categorises traits frequently connected with different stages of this innovation process (Basadur, 2004; Kanter, 1988; Runco, 1994). For example, in the entrepreneurial literature, opportunity analysis comes before ideation. Furthermore, numerous personality and contextual variables impact these actions. The four steps of the innovative work process are the following: idea discovery, concept development, concept promotion and concept implementation (De Jong & Den Hartog, 2008).

When innovation starts, some element of luck is frequently involved, such as finding an opening or spotting a problem. It might represent a chance for advancement or a danger requiring an immediate response. The need for procedures in response to problems or failures that have been identified, changes in business or market structures, changes in demographics like employment arrangements, changes in perceptions, and new information are just a few examples of external factors that can affect a business (Drucker, 1985). A concept is investigated by thinking about it imaginatively and seeking out methods to enhance existing used goods, services or procedures (Basadur, 2004; Farr & Ford, 1990; Kanter, 1988)

The next step in the procedure is ideation. Examples of ideas include innovative services, goods, or actions, entry into novel markets, enhancing current labour procedures, and, further generally, resolving identified issues (Amabile, 1988; De Jong & Den Hartog, 2008; Kanter, 1988; Van de Ven, 1986).

Once an idea is developed, its marketing becomes essential. Most ideas need marketing since they are often incompatible with the workgroup or organisation's current practices. Even if a concept is basic or seems to close a performance gap, it is often debatable if the advantages outweigh the price of implementing it. Change resistance is widespread (Kanter, 1988). the marketing of the idea needs leaders who can drive innovative ideas beyond organisational restrictions (Howell *et al.*, 2005). The leader needs to create a coalition of supporters and play a pivotal role in providing vision, strategic direction and effective communication. They mobilise and empower coalition members, build relationships, and overcome challenges to market innovative ideas successfully.

Ideas must be implemented at some stage. To operationalise ideas, effort and concentration are necessary (Kleysen & Street, 2001), both requiring self-regulation. The principle of self-regulation

underpins the IWB process. Conscious personal management and self-regulation involve regulating one's thoughts, actions and emotions to accomplish objectives. In the context of leadership, self-regulation refers to the ability of a leader to effectively manage and control their thoughts, emotions and behaviours. It involves the capacity to regulate one's impulses, emotions and reactions to align with desired leadership values, goals and ethical standards.

Numerous scholars, psychiatrists and scientists have studied ways of self-regulation. Albert Bandura, a cognitive psychologist specialising in behaviour acquisition, contributed significantly to "social cognitive theory and social learning theory". His study incorporated cognitive and behavioural components and found that self-regulation is how individuals govern their behaviour (Bandura & Jourden, 1991). This includes self-observation, self-evaluation and self-response. Self-observation and self-evaluation play a crucial role in self-regulation, as individuals continuously monitor and compare their progress to their goals. If there is a discrepancy, individuals engage in self-reinforcement or self-punishment to modify their behaviour and bring it closer to their desired standards.

2.5.1 Self-Regulation Theory

The self-regulation theory as part of this theoretical construct is discussed in this section. The self-regulation idea states that intentional self-management entails controlling one's thoughts, behaviour, and emotions to achieve one's objectives. Understanding and controlling one's emotions and behaviour is referred to as self-regulation. It helps individuals learn, behave responsibly, interact with others, and grow independently. Self-regulation involves a collection of psychological subfunctions that must be developed and activated for self-directed transformation. If individuals cannot control their motivation and behaviour, neither intention nor desire impacts them.

Bandura researched self-regulation. He devised the reciprocal determinism triangle, which comprises interdependent cognitive, emotional and physical components. In addition, he demonstrated that identity observation, self-reaction, self-evaluation, and self-effectiveness affected goal accomplishment and motivation (Bandura & Jourden, 1991). Muraven, Tice and Baumeister (cited in Muraven & Baumeister, 2000) explored self-control as a predictable resource. They proposed three compatible concepts of self-direction: self-directive as a forte, information construction and ability.

According to the strength model, self-control is an asset since it demands willpower and is a limited resource. The depletion of this resource may explain the lack of self-control. Muraven and

Baumeister (2000) reasoned that a lack of self-control might be linked to ignorance because self-control requires certain knowledge. Self-control is an intellectual capacity that cannot be restored; thus, a lack of practice leads to losing the ability to control oneself. According to research demonstrating that self-control is a finite resource, self-regulation as an asset is the most often accepted paradigm.

Self-regulation is a crucial ability for emotional wellness, according to research (Cameron & Leventhal, 2003). To manage impulses, self-regulation involves distinguishing between immediate desires and long-term objectives. Individuals can plan and analyse their activities and avoid doing things they may regret later. When an individual's essential values are broken, they experience guilt, which may harm health. When individuals overestimate their power to change situations, they create the illusion of control. When an event happens, for example, an individual may have more control over the outcome. This underlines the significance of feeling in control of one's life (Muraven & Baumeister, 2000).

Norms represent the ideal form of behaviour. Compliance with regulations reflects adherence to these norms and acts as a source of motivation. Before flouting any rules, individuals actively monitor their situations and mental states to weigh the risks and benefits of breaking the rules. The capacity to resist temptation is known as willpower. Self-regulated learning is about assuming responsibility for learning and conducting and assessing it. This highlights the influence of the person managing information-related activities, which is essential for creativity and new work practices (Baumeister, Schmeichel *et al.*, 2007). Therefore, it is apparent that the "self-regulation theory" is a notion of mindful individual management that encompasses controlling one's ideas, behaviours and emotions to attain one's objectives. Self-regulation is a collection of psychological subfunctions that must be established and used to support self-directed transformation. A goal or desire has limited significance if one cannot control motivation and behaviour (De Jong & Den Hartog, 2008).

This theoretical foundation aims to support the problem raised in this study as to whether the inability of impostors to self-regulate influences the outcome of their decision-making and IWB. According to the self-regulation theory, impostors should use purposeful personal management to manage their thoughts, behaviours and emotions to achieve one's goals. Thus, an impostor needs to manage impostor thoughts not to be affected by these feelings and reach their full potential. For an impostor to promote self-directed transformation, a variety of psychological subfunctions known as self-regulation must be developed and employed (De Jong & Den Hartog,

2008). Self-regulation will assist impostors in behaving responsibly, interacting with others and growing independently.

2.5.2 Goal-setting Theory

The goal-setting theory as part of this theoretical construct is discussed in this section. According to the goal-setting theory, setting measurable, well-defined goals will increase employee engagement and productivity. This point of view contends that task performance and goal formulation are inherently related. It contends that clear, challenging objectives and good feedback result in increased and better task performance. This theory further examines the consequences of goal-setting on future performance. Using goal-setting at work makes boosting employee performance and engagement feasible (Odoardi *et al.*, 2010).

IWB is seen as a component of a broader motivational process that includes dual activities: goal formulation, which consists of thinking and planning sub-processes, and goal pursuit, which consists of executing and reflecting sub-processes. Several studies have explored the impact of certain elements of the work environment, which include aspects related to the design and developmental context of work, as well as the motivational states of individuals, including their self-beliefs, psychological resources, and the alignment of their roles. Additionally, candidates' compatibility with these factors has been examined concerning the motivational processes involved in achieving a range of novel and successful innovative outcomes (Odoardi *et al.*, 2010).

Multiple empirical studies over the last four decades have shed light on the roles of diverse individuals, groups and organisational factors in creativity. This emphasises the importance of occupational and organisational psychology research to the innovation process. Several components of the workplace innovation process are aided or hampered by external factors (Amabile, 1988; Anderson *et al.*, 2004; Damanpour, 1991; Odoardi *et al.*, 2010; Shalley & Gilson, 2004; West *et al.*, 1990). Scholars have studied how the strength and direction of links between innovation and other attributes have shifted over the previous ten years (George & Zhou, 2002). However, there have been relatively few efforts to explore how unique individual, societal and organisational features may encourage the human drive to launch and maintain innovative behaviour (Odoardi *et al.*, 2010)

Using theories, a goal-directed model of innovation motivation can be formed that may throw light on three critical, unresolved research concerns. According to research, complex, nuanced and specific goals influence employee performance. Indirectly, objectives encourage individuals to research and embrace solutions to help them achieve their goals (Odoardi *et al.*, 2010).

Given this premise, it is logical to assume that the connection between motivation and objectives will be replicated in the innovation domain; therefore, it is reasonable to hypothesise that innovation-specific objectives may stimulate motivational processes that contribute to innovation-related achievement. Research on organisational behaviour and work psychology offer concrete evidence of the positive effect of goals on creativity (Odoardi *et al.*, 2010)

Individuals display higher innovation when management provides explicit organisational objectives (Amabile & Gryskiewicz, 1987). Furthermore, it has been found that setting creative goals boosts innovative performance (Shalley, 1991). These findings indicate that having clear goals for innovation is one of the best ways to promote IWB among employees. By establishing objectives related to innovation, such as promoting new ideas and implementing them in the workplace, companies can reinvigorate the innovation process. This, in turn, is expected to enhance motivation levels, which are typically associated with traditional job performance. Therefore, setting innovation-related goals can potentially encourage IWB in the workplace (Odoardi *et al.*, 2010).

The self-regulatory model of workplace initiative builds upon Parker's research and key concepts of self-regulation and motivation. In this model, individuals engage in self-regulation, which involves setting goals, planning actions, and monitoring progress towards achieving those goals (Parker *et al.*, 2010). Workplace initiative refers to the proactive and self-directed behaviours that individuals demonstrate to bring about positive changes in their work environment. While the model suggests a linear progression from goal setting to action planning to goal attainment, it recognises that feedback loops and interactions between different stages can occur. For example, as individuals take action towards their goals, they may encounter new information or challenges that require them to revise their initial plans. This iterative process of feedback and adjustment allows for a dynamic and flexible approach to workplace initiative (Gollwitzer, 1990; Parker *et al.*, 2010; Spates & Kanfer, 1977).

Selecting specific targets and designing plans and methods to achieve them are all part of goal formulation. Specifically, visualising involves establishing goals that indicate anticipated results in changing or improving the work environment or the job itself, such as enhancing services, introducing new work techniques, or enhancing one's effectiveness on work duties. Planning requires creating a road map for accomplishing one's objectives, such as developing the correct mentality before participating in change-oriented behaviour or examining alternatives (Odoardi *et al.*, 2010).

Goal pursuit involves managing effort while pursuing a goal by participating in appropriate goal-directed behaviour. Enacting involves participating in overt change behaviours, such as innovative behaviour, to attain innovative objectives, such as producing and implementing good ideas at work, and monitoring one's imaginative behaviours to self-regulate one's attempts. The more effort required to achieve creative objectives in creating appropriate plans of action and analysing their influence on the environment and the work itself, the more crucial innovative processes are in planning and strategy (Chen & Göğüş, 2008; Parker & Ohly, 2008). As a result, it is believed that the efficiency of these motivating processes will improve innovation-related activities, which might help attain stated innovation objectives.

The correlation between declared goals and actual accomplishments is positively supported by work and organisational psychology studies, which is consistent with goal-setting (Locke & Latham, 1990, 2002). Thus, the efficacy of these motivating processes will boost innovation-related activities, which may contribute to attaining stated innovation goals.

Published research and organisational psychology studies provide empirical evidence for the positive association between stated aims and subsequently achieved performance, compatible with goal-setting (Odoardi *et al.*, 2010). Thus, it is projected that this motivating process will favour goal-seeking by triggering innovative behaviours targeted at completing self-defined objectives and successfully analysing the impact of creative attempts to modify one's activities. Focusing on the interrelationships between these processes may enhance our understanding of the what and how of goal pursuit, i.e., which kinds of positive impact encourage individuals to engage in innovative activities (Odoardi *et al.*, 2010).

This theoretical foundation aims to support the problem raised in this study, as an impostor manages their innovative behaviours to self-regulate their attempts that would lead to improved creativity and, in return, increased IWB.

This theory forms part of this theoretical construct as, according to the goal-setting theory, setting measurable, well-defined goals will increase employee engagement and productivity. It contends that clear, challenging objectives and sufficient feedback result in increased and better task performance. This theory also supports the importance of how setting goals affects future performance.

2.6 SUMMARY

The theoretical underpinning of the main concepts presented in this study was discussed in this chapter. This framework provides a theoretical foundation for comprehending the study's philosophical, epistemological, methodological and analytical methods and introduces and defines the theoretical underpinnings supporting the research study's constructs. This literature review in the next chapter assesses academic sources on the research's central topic and themes. It compiles current data and assists in validating critical concepts, methodologies and gaps in previous research on related topics.

CHAPTER 3

LITERATURE REVIEW OF THE IP, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR

*“The problem with the world is that intelligent individuals are full of doubts
and the stupid ones are full of confidence.”*

-Charles Bukowski -

3.1 INTRODUCTION

According to Kumar, a literature review is critical as it influences the research process (Kumar, 2018). This review is intended to aid in developing a thorough understanding of the current research on a phenomenon, its meaning and context (De Vos *et al.*, 2011). It highlights prior research pertinent to the research theme and shows how similar research issues have been addressed (Stead, 2001). This literature review is a comprehensive evaluation of scholarly materials on the central concepts of this research. It summarises existing information and assists with the confirmation of relevant ideas and methodologies in previous research on related topics. The literature structure is aligned with the research objectives, questions and hypotheses. Therefore, this literature review focuses on the four research constructs of this study. The first section presents a literature review on the IP as a research construct.

3.2 IMPOSTOR PHENOMENON

“... just look at all these (famous) individuals,
and I think, what the heck and I doing here?
They’ve made amazing things.
I just went where I was sent”
Neil Armstrong -

In their 1978 essay, “The IP in High-Achieving Women: Dynamics and Therapeutic Intervention,” Clance and Imes (1978) created the term “*Imposter Phenomenon (IP)*”. They defined the IP as a person’s perception of intellectual phoniness. These writers proposed that gender roles, early family dynamics, history and the perception of how others regard one all impact the formation of this mental model of an impostor. The IP affects individuals from all areas of life. This phenomenon is seen as an impediment to an individual’s potential rather than a roadblock to achievement (Clance & O’Toole, 1987; Cozzarelli & Major, 1990). According to studies, defensive pessimism ratings are the main factor separating impostors from non-impostors. This defensive

strategy entails downplaying previous triumphs and lowering expectations when confronted with new difficulties (Cozzarelli & Major, 1990).

Individuals are often asked to perform tasks for which they are unprepared during transformative periods, such as new ventures and career changes (Clark *et al.*, 2014). Most individuals develop self-doubt when presented with new and unique circumstances (Oleson *et al.*, 2000). IP feelings may be more significant when taking on new duties or starting a new job as the impostor is confronted with new challenges (De Vries, 2005). Research has shown that these individuals fear being discovered as not fulfilling their new roles in this changing environment (Vergauwe *et al.*, 2015).

The IP has been researched in various areas, including higher education, accounting, finance, law, health care, and marketing (Parkman, 2016). Individuals who work in fields like the creative arts, whose objective success indicators are frequently unrelated to the quality of the work produced, are especially vulnerable to the IP (Parkman, 2016).

Despite this external validation, impostors disregard personal acknowledgement of their accomplishments and recognition by their peers for their career successes and academic performance, as evidenced by degrees earned. Impostors often conclude how chance played a role in their successful outcomes. At the same time, they overlook the role that intellect and abilities play (Clance & Imes, 1978).

3.2.1 Previous studies on the impostor phenomenon and its implications for employees and organisations.

The IP, often denoted as impostorism, is a psychological phenomenon in which a person continuously questions their aptitudes, competencies, or accomplishments and is exposed as a “fake” (Oxford English Dictionary, 1989). The IP exaggerates this feeling of failure (Cowman & Ferrari, 2002; Orbé-Austin & Orbé-Austin, 2020). Individuals who have encountered this phenomenon feel their success is merely a coincidence or a product of their connections rather than their intelligence or talent (Clance & Imes, 1978; Cusack *et al.*, 2013). The IP convinces individuals that their success is mostly a product of their ability to deceive others into believing it is earned. It manifests as a person’s perception of intellectual hypocrisy (Clance & Imes, 1978). Perfectionism exacerbates anxiety and self-doubt, leading to the IP, a dysfunctional personality type, a collection of psychological characteristics (Ross & Krukowski, 2003).

The IP is a multi-faceted construct consisting of various characteristics such as self-doubt, attributing achievement to external causes, berating performance, inability to realistically assess skills, and worry that an individual will not live up to expectations. These are significant traits that may characterise the IP (Cuncic, 2021). Research suggests that the IP has been attributed to perfectionism, contributing to the fear of failure and self-doubt (LaDonna *et al.*, 2018). IP creates erroneous self-evaluation. This type of appraisal describes individuals who lack an inherent sense of achievement. Many believe they lack the necessary skills or abilities when the IP occurs. Self-doubt is a two-edged influence that may inspire someone to do better, drive them to overwork, over-prepare, or completely abandon their involvement with an activity (Persky, 2018).

Impostors are high achievers who downplay successes. Individuals who experience IP are often high achievers who finish their graduate work and attain career-related successes, often at a high cost to their psychological well-being. IP causes those with little experience to question whether their accomplishments genuinely deserve acknowledgement in the face of indisputable evidence (Cusack *et al.*, 2013). They blame the environment rather than their skills for their performance. This view hampers impostor tendencies that success is dependent on outside influences. Impostors use pessimistic self-talk to convince themselves they are unworthy of their performances. This pessimistic self-talk justifies their irrational thoughts objectively (Orbé-Austin & Orbé-Austin, 2020). Impostors portray a fixed mentality stating that hard work and experience do not increase skill and are only uninterested in satisfactory results. Neither empirical evidence of success nor authentic subjective results can suppress their feelings of impostorism. Constructive reinforcement may not motivate them (Kumari *et al.*, 2019).

Family history has been connected to this phenomenon (Castro *et al.*, 2004; King & Cooley, 1995). According to Imes, those who had encountered IP were reared in homes that emphasised achievement (Clance & Imes, 1978). When parents send inconsistent messages, such as switching between praise and criticism, their children will likely misinterpret feedback in the future. The lack of parental attention and increased paternal control manifest in later life features of an individual with IP-related tendencies (Sonnak & Towell, 2001). These impostor tendencies may manifest in perfectionistic behaviour (Lee *et al.*, 2020). Impostors believe that whatever activity they complete must be faultless and rarely accept assistance. According to Imes and Clance, perfectionism will cause two distinct responses to the phenomenon's manifestation (Clance & Imes, 1978). An impostor may postpone a task out of concern that they will not complete it to the requisite high standards, or they may over-plan and devote far more time to it than is necessary (Clance & Imes, 1978).

Impostor behaviours are also connected to those who are the first to succeed in job, financial, and educational goals within their family structures (Castro *et al.*, 2004). Acceptance, affection and deservingness are all readily misunderstood concepts for individuals who suffer from the IP. Achievement becomes a benchmark by which one's self-worth is measured (Clance & Imes, 1978). The IP influences an individual's identity. Insecurity jeopardises an individual's self-identification (Knights & Clarke, 2014). Impostors are continually pressured not to reveal their perceived incompetence to others (Clance & Imes, 1978). They constantly and repeatedly show their merit, and this expectation to excel causes anxiety and insecurity (Knights & Clarke, 2014). The Instability experience exposes an individual's personality and is socially denied or disproved (Knights & Clarke, 2014). While the IP is not a mental illness, it is a distorted sense of self-worth that may significantly affect an individual's perceived worth (Leahy, 2005). Studies indicate that eliminating self-doubt before certain events aids in eradicating sentiments of impostorism (Clance & Imes, 1978). The literature emphasises the vital significance of self-esteem related to IP. Impostors are affected by low self-esteem and self-worth caused by this phenomenon. Numerous psychological approaches to overcoming this phenomenon entail separating these conceptions, self-esteem and self-worth, into distinctly independent entities (Walton & Cohen, 2007). The IP affects job identity. Increased anxiety attacks and despair (Chrisman *et al.*, 1995; McGregor *et al.*, 2008; Oriel *et al.*, 2004), mental and emotional distress (Henning *et al.*, 1998), and low self-confidence (Kumar & Jagacinski, 2011) are all expected consequences of sustained IP thoughts: all characteristics which negatively impact job wellbeing, satisfaction and success (Hutchins, 2015). New employees are yet to build their job identity because they lack qualifications and experience, despite improving their skills (Neureiter & Traut-Mattausch, 2016). Because of this lack of expertise, self-doubt may emerge. They are, therefore, more likely to experience IP-related characteristics (Hutchins, 2015). In contrast, experienced employees have fewer impostor sentiments due to their experience (Neureiter & Traut-Mattausch, 2016). Reducing standards, networking, timing, and charisma are reasons impostors feel they achieve success (Clance & Imes, 1978; Cowman & Ferrari, 2002; Fried-Buchalter, 1997). Impostors acknowledge that they are aware of the perceptions others have about them, and even if they praise them, they feel undeserving (Clance & Imes, 1978; Sakulku, 2011). Consequently, a highly favourable but inaccurate impression of competence has been created (Parkman, 2016). Instead, their success is ascribed to how they display themselves since it enables them to hide the genuine nature of their performance (Cowman & Ferrari, 2002; De Vries, 2005; Kumar & Jagacinski, 2006; Kumari *et al.*, 2019; Sakulku, 2011). The IP affects self-esteem and self-efficacy. For individuals who experience the IP, maintaining this false facade becomes a key concern. Due to a deficiency of internalisation of prior successes, an external locus of control, and a lack of self-confidence, these

individuals concentrate on image maintenance and self-monitoring behaviours (Cowman & Ferrari, 2002; Kumar & Jagacinski, 2006; Kumari *et al.*, 2019; Sakulku, 2011). Low self-esteem and self-efficacy are well-known organisational impostor tendencies (Dahlvig, 2013; Parkman, 2016). A person's incapacity to appropriately appraise their competence is attributed to impostorism. Over time, stress and concern frequently accompany a decline in self-assurance, the internalisation of failures, and excessive attention to mistakes (De Vries, 2005; Want & Kleitman, 2006). Impostors work longer and harder while aiming for perfection; they see this as the sole means of living up to expectations set by others and themselves (Cowman & Ferrari, 2002; Sakulku, 2011; Thompson, 2016). The IP leads to mental deviations. Impostors often engage in behaviour that jeopardises their performance and causes them to dislike their positions (Clance & Imes, 1978; Cowman & Ferrari, 2002; De Vries, 2005). Impostors use humour in self-deprecation to reject praise and favourable public acknowledgement, thereby undermining their perceived image of competence (Ferrari & Thompson, 2006; McElwee & Yurak, 2007). The emphasis shifts to sustaining the illusion for as long as feasible until a strategy of escape can be devised to remove them from the situation (Parkman, 2016).

There are suggestions that individuals with high IP scores display more intense anxiety, dread, uncertainty and psychosomatic symptoms. Additionally, they claim that these individuals are more reclusive, vulnerable to criticism and fearful of failure (Ross *et al.*, 2001). The social interdependence theory of accomplishment states that interpersonal performance elements are either cooperative or competitive. This theory claims that communal tendencies are linked to increased contact, acceptance of feelings and a more dynamic perspective of oneself and others. In contrast, competitive events are seen as less beneficial to the development of socialisation (Johnson & Johnson, 1983; Ross *et al.*, 2001). Individuals with IP tendencies frequently overestimate the skills of others, which causes them to become preoccupied with effort and perfection of their own. Unrealistic ambitions eventually become unachievable because of the high success requirements they set for themselves. Failure and worry are often the results of this self-set requirement (Clance & Imes, 1978). Often impostors' emotions are further heightened; as a result, the impostor will become a workaholic, resulting in exhaustion and increased burnout (Cowman & Ferrari, 2002; De Vries, 2005). Impostors seldom attempt to lower their expectations to alleviate this stress (Leary *et al.*, 2000).

Previous research identifies two distinct groupings of competitive dispositions: hyper-competitiveness and personal development. Hyper-competitiveness is an intense drive to compete and avoid losing at any cost (Ryckman *et al.*, 1990). An attitude of personal growth prioritises finishing a challenging project over the result (Ryckman *et al.*, 1996). Instead of being

driven by competition, these individuals care about other individuals' well-being and treat individuals respectfully (Ryckman *et al.*, 1996). Self-handicapping is a motivating factor associated with the performances of impostors. Self-handicapping occurs when individuals intentionally block their performance to safeguard or enhance their self-esteem. Self-handicapped individuals frequently exhibit anxiety and shyness and may cite emotional anguish or physical challenges as a justification for failing (Rhodewalt, 1990). When self-handicapping reduces internal failure attributions, self-esteem damage may result.

The relationship between impostor complete personality models has not received much attention in research. However, research confirms that all personality traits have a significant relationship. A link between IP and achievement desires, a core personality quality, was found (Harvey, 1981). A positive association has been found between the IP and neuroticism, contrasting extraversion, agreeability and conscientiousness, which exhibited a negative relationship (Chae *et al.*, 1995; Ross *et al.*, 2001).

Hoang (2013) proposed in a study that specific tools can be implemented, which may assist individuals to feel less like impostors. For example, implementing a mentoring service for new or entering individuals in a specific situation would alleviate self-doubt. If unique individuals have a mentor who may provide guidance, they are more inspired. This significantly eases and reduces the stress caused by impostor feelings (Hoang, 2013). The IP affects individuals of different genders and cultural backgrounds in diverse manners. During early research regarding the IP, research indicated that women confronted with the IP exhibited sadness, generalised anxiety and low self-esteem (Clance & Imes, 1978). Clance and Imes assessed the prevalence of this subjective perspective when this trend was observed in the researchers' clinical work with women and their college lectures. These researchers discovered this effect was more common and severe in women during their initial examination. Women are more likely to attribute disappointment to an absence of capability. In contrast, men attribute failure to external factors such as work insecurity. Women further appear to have internalised the social gender-role stereotype into a self-stereotype because of their success, owing to their lower expectations (Broverman *et al.*, 1972; Rosenkrantz *et al.*, 1968).

Later studies found that this experience is not exclusive to high-achieving women; this phenomenon affects both men and women equally (Byrnes & Lester, 1995; Clance & Imes, 1978; Cozzarelli & Major, 1990; Cromwell *et al.*, 1990; Edwards *et al.*, 1987; Fried-Buchalter, 1997; Topping, 1983). Research further indicated that individuals of the opposing gender are more prone to exhibit impostor tendencies in occupations where one gender dominates (Harvey, 1981;

Ling *et al.*, 2020). According to research by Clance and Imes, it is hypothesised that women are more likely to have experienced this phenomenon than men (Craddock *et al.*, 2011). In terms of internalised success, treatment expectations and fear of failure, female academics, for example, showed a more significant relationship with IP emotions than males (Clance & Imes, 1978; Kumar, 2018). This is especially true for female academics pursuing degrees in disciplines society considers women unsuitable for, such as sciences or engineering (McIntosh *et al.*, 1985). Psychologists assert that women downplay their accomplishments in the “man’s world” to allay their fears of domination and rejection. Increased analysis of this pattern has focused on women’s aversion to success, stemming from their fear of being judged, blamed, dismissed or labelled unfeminine (Harvey & Katz, 1985). Even if today’s society accepts women achieving without being socially excluded, the manifestations of phenomena like the IP and other male-controlled structures continue to make it difficult for women in senior positions to be as ambitious as men (Harvey & Katz, 1985). In a male-dominated work atmosphere, IP sentiments might be amplified. Because of a historical lack of authentic female role models in high management positions, women frequently underestimate their ability to fill them (Young *et al.*, 2013). These impostors may believe they are unqualified for a job (Hoang, 2013). They may think they were chosen for their looks or uniqueness rather than their abilities or qualities.

Impostorism directly impacts one’s experiences, especially when one’s professional identity is exposed. Research also indicates that ethnic minorities suffer emotional and scholastic consequences due to the IP (Ostrove, 2003). Individuals from these groups are more prone to experience impostor tendencies because they feel discriminated against (Attewell & Domina, 2011). For example, members of ethnic minorities who voice objectionable ideas usually find themselves being treated as hostile (Ostrove, 2003).

According to Miller and Kastberg, overt and implicit discrimination and prejudice make it far more difficult for ethnic minorities to pursue professional careers, for example, employment in higher education or technical disciplines (Miller & Kastberg, 1995). For instance, when ethnic women from poor and middle-class households attend elite meetings, research indicates they feel more detached from their co-workers (Ostrove, 2003). Impostor tendencies may arise as emotions stem from their conviction that they were admitted to that institution of higher learning through affirmative action or by chance (Cokley *et al.*, 2013).

The impostor loop is when the emotions experienced by an impostor manifest in a recurring cycle. According to Clance and Imes (1978), the impostor loop commences when an individual who suffers from the IP is confronted with an achievement-related mission, such as a job or school

assignment (Clance & Imes, 1978). Anxiety, self-doubt, and concern surface immediately after receiving such an assignment. The loop accounts for two possible reactions to these emotions: excessive preparation or procrastination. If one *over-prepares* for a task, the favourable results may be considered extra work. There will be a moment of pride and relief before the job ends. Too often, helpful criticism is ignored before the task is finished. Procrastination quickly deteriorates into an ineffective attempt to fulfil the objective. The outcome is considered unpredictable when an individual reacts by postponing (Clance & Imes, 1978). Within this loop, good performance is seen as a matter of chance, not as a manifestation of genuine human talent (Clance & Imes, 1978). Even if the outcome is favourable, the criticism provided has little impact on the impostor's sense of individual achievement. As a result, constructive criticism is discounted. Feelings of potential forgery are amplified, and consequently, feelings of depression, anxiety and self-doubt increase. As the sequence continues, augmented performance increases, making the individual feel like a fraud (Clance & Imes, 1978). Figure.3.1 depicts the impostor loop.

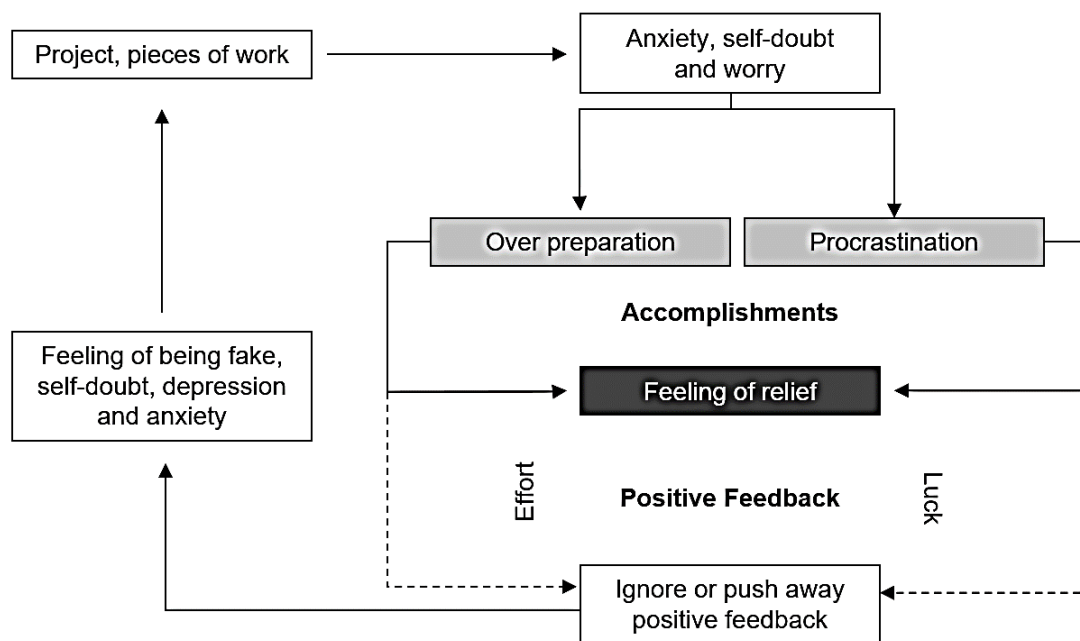


Figure 3.1: The Impostor Loop

Source (Clance & Imes, 1978)

3.2.2 Implications of the IP for Managers/Leaders

The influence of the IP affects managers/leaders. Even though IP has been extensively studied, early research focused on the influence of this phenomenon on student groups rather than

corporations or corporate leaders (Rohrmann *et al.*, 2016). Significant research has been done on failure anxiety and how individuals from various backgrounds and professions manage it (Jackson, 2018). The IP has been linked to the fear of failure, which has been demonstrated to have the capacity to have both positive and negative impacts on individuals and organisations (Mount & Tardanico, 2014). Researchers have shown that failure anxiety affects organisations on various levels. Executives who fear failure may hinder a company on a structural level by delaying essential changes that would assist with organisational progress (de Souza & Tomei, 2016). Anxiety may immobilise a leader, preventing them from making crucial decisions. A leader's fear of making errors may stand between them and success in their line of work individually. Organisational performance may also suffer due to this stalling of advancement due to this anxiety (Cacciotti *et al.*, 2016a).

The IP leads to fear of failure, affecting managers/leaders. Fear of failing may drive leaders. Despite confessing to fear of failure, professionals may be tremendously motivated to achieve in their jobs and organisations (Cacciotti *et al.*, 2016a). Although the fear of failure may seem a barrier, certain team members could benefit from a leader who struggles with impostor tendencies (de Souza & Tomei, 2016; Morgan & Sisak, 2016). When leaders are uncertain of their ability to achieve, they may focus more on the details to prevent mistakes that indicate a lack of commitment (de Souza & Tomei, 2016). Therefore, organisations and leaders may produce better, higher-quality outcomes due to the resulting attention to detail, which may foster the leader's development and enhance organisational success (Cacciotti *et al.*, 2016a).

The IP affects self-confidence, which influences managers/leaders. Self-confidence is how individuals assess their capacity to carry out a task successfully. According to Hollenbeck and Hall (2004), early studies on the topic revealed that self-assurance was a trait that individuals either possessed from birth or had been exposed to when they were young by a nurturing family or environment. However, present-day research indicates that confidence is gained, a trait one can work toward acquiring. Lack of confidence and impostor personality characteristics significantly impact leaders. The outcomes may differ when two persons performing the same tasks in the same capacity with the same set of talents and skills do so. These individuals' degrees of confidence may explain why successful individuals perform at a greater level than failed individuals (Hollenbeck & Hall, 2004).

According to the researchers, an overconfident leader may neglect to foresee actions that can harm the organisation. Self-assurance enables a leader to retain a level-headed and objective attitude to attaining goals. Confidence affects a leader's effectiveness; low confidence may cause

a leader to take extra time to prepare and present a compelling vision properly and strategically. A confident leader may also perceive fewer circumstances as hazardous, allowing them to advance and enjoy advancement (Shipman & Mumford, 2011).

The IP leads to perfectionism which affects managers/leaders. Perfectionistic leaders may influence organisations. Perfectionists strive for excellence personally and professionally (Flett & Hewitt, 2002). Perfectionism is incompatible with good leadership; good leaders flourish while making judgements that may seem absurd or nonsensical to others, take calculated risks, and manage complex and ambiguous situations skilfully (White, 2016). Since they never fully feel satisfied with themselves or their work, perfectionists may also have depressive tendencies (Flett & Hewitt, 2002). Leaders who strive for perfection typically lack decisiveness. Leaders with perfectionism find it challenging to manage difficult circumstances (White, 2016). Before making a decision, perfectionists need to feel secure, which might result in procrastination tendencies related to the IP (Mount & Tardano, 2014).

The IP leads to risk aversion, which affects managers/leaders. Risk aversion is another factor that affects leaders with impostor tendencies to act in the face of uncertainty. When they cannot guarantee an outcome, they would rather avoid the risk of making a decision that does not work. A leader's reluctance to participate in an organisation's transformation process is also related to risk aversion (Oreg, 2003). It has also been shown that risk aversion hinders a leader's capacity to make quick judgements that might help a group or organisation. The goals a leader sets for their team and how he collaborates with followers to achieve them will be influenced by his readiness to take on risks, his level of risk tolerance, and his desire to do so (Ivancevich *et al.*, 1990).

Studies have distinguished between managers' and organisational leaders' calculated and uncalculated decisions (Simon, 1960). Leaders do not need to take risks when calculating judgements since they often concern common issues. Opposingly, Simon argued that non-calculated decisions faced more complex problems and circumstances with a more significant impact on the situation. Consequently, non-programmed conclusions are riskier than often made (Simon, 1960).

As already established, the IP has been linked to fear; therefore, impostor tendencies affect an individual's ability to take risks (Clance & O'Toole, 1987). A person's risk aversion tends to rise with their level of fear (Holt & Laury, 2002). Risk aversion can be correlated with various emotions, such as fear, rage, surprise and joy (Holt & Laury, 2002). It has been established that those who

displayed more emotion were more likely to resist taking chances. In contrast, neutral individuals were more inclined to take higher risks (Mount & Tardanico, 2014).

Managerial risk aversion may result in organisational decline because managers may be less inclined to accept the risk if they fail to seek out essential information from others or listen to their peers' opinions while making decisions (Carmeli & Sheaffer, 2009). To maintain group coherence or out of anxiety that they would no longer be accepted as a group member, an individual may opt not to voice a different perspective from the views put out by other group members (Mann & Janis, 1982).

The IP affects decision-making, which affects managers/leaders. The success of a leader may be influenced by their capacity for producing transparent, confident, efficient and collaborative decisions (Brunsson, 2007). Organisational leaders must be able to answer for their acts and the outcomes of those activities. Indecisiveness is the frequent failure to decide rapidly and effectively with assurance. Researchers hypothesised that leaders who struggle with making decisions retaliate by acting impulsively or postponing the process further (Barkley-Levenson & Fox, 2016). Hesitation may be caused by worry and other unpleasant emotions (Elaydi, 2006). According to a study, unpleasant emotions may be so intense that they emotionally freeze the individual when making a difficult decision. Thus, being indecisive may negatively influence individuals and businesses (Elaydi, 2006).

Leaders who find it challenging to make decisions often find themselves in confusing and unpleasant situations (Jones, 1989). When a leader must decide and gets mired down in the decision-making process, it might cause high anxiety for them. Since perfectionism breeds doubt, as previously shown, leaders who deal with the IP are prone to suffer from perfectionism, making them feel uneasy and worried. Uncertainty prevents leaders from carrying out their duties successfully (Elaydi, 2006). Due to their reluctance to make decisions, these leaders may also be less equipped to handle difficulties at work (McNeill *et al.*, 2016).

The IP affects managers'/leaders' behaviour. When a person decides to put off action even when he is aware that doing so can have consequences, that behaviour is known as procrastination. Procrastination as an impostor trait may influence leaders (Steel, 2007). Another way to characterise the phenomenon is delaying more difficult or complex chores in favour of simpler or more pleasurable ones (Batool *et al.*, 2017). The term "arousal procrastination" indicates the gratifying sense of arousal from finishing an assignment right before the due date (Lyons & Rice, 2014). Avoidant procrastination and arousal are the two categories of procrastination. Avoidant

procrastination is delaying activities to concentrate on easier ones or to avoid receiving critical feedback about one's performance (Lyons & Rice, 2014).

In the workplace, procrastination is common but can have a negative financial and productivity impact (Nguyen *et al.*, 2013). Researchers have found that individuals who frequently miss deadlines also often hold lower-paying occupations for which they have less intrinsic drive. Procrastination has been linked to poor self-control, particularly under severe stress or a significant workload (Klassen *et al.*, 2008). According to a 2008 study, individuals with greater self-esteem levels are less prone to develop the practice of procrastination (Klassen *et al.*, 2008). Early beliefs on the IP, notably the lack of confidence that impostors experience, clearly connect to procrastinators' low self-esteem. In addition, it is consistent with the notion that impostors worry about seeming inadequate to delay completing their duties out of fear of criticism (Clance, 1985; Lyons & Rice, 2014).

The IP affects professional environments. Professional identity development is a multifaceted process that culminates in belonging to a specific occupation. Employees strive to establish their worthiness by acting appropriately for their jobs (Knights & Clarke, 2014). However, according to research, cultural shifts may cause individuals to face conflict or disagreement over how diverse societies' values and expectations differ, prompting them to reorganise the borders between their technical, personal, and private realms of identification (Fitzgerald, 2020; Whitmore & Fry, 1974). Because an individual's personality is inextricably linked to their profession and the person they present at work, those who suffer from the IP often blame themselves for their failures (Knights & Clarke, 2014). Due to the high bar set for demonstrating their intelligence, these individuals attempt to control these tendencies through perfectionism (Cokley *et al.*, 2018). As a result, perfectionism becomes a symptom of the IP (Vergauwe *et al.*, 2015).

For example, the IP is prominent in higher education environments. Higher education's current work environment and individuals' personality traits contribute to developing impostor tendencies (Parkman, 2016). Individuals with greater conscientiousness, success-oriented, perfectionistic ambitions and working in highly competitive and demanding occupations are more likely to be influenced by the IP. Academic environments with ambiguous performance standards, variable levels of support, and intense competition for funding may unintentionally foster impostor traits like self-doubt and fraudulence (Seritan & Mehta, 2016). Scholarly isolation, harsh rivalry, a lack of mentoring and a value system that values outcomes over process are ingrained in university culture. Hence, IP-induced sentiments are particularly prevalent among faculty and students (Parkman, 2016).

The IP is likely to manifest itself in similar ways. Because of the personal impact of an impostor, emotions may affect how lecturers engage with students, advise students, supervise and engage in research activities. Lecturers are likely to limit student engagement. Lecturers with impostor tendencies lecture more often, allowing fewer contacts and exiting class to avoid answering queries (Parkman, 2016). Concerns are raised by these potentially detrimental effects on scholarship, service, teaching, and the connection between faculty exhaustion (Hutchins, 2015).

The need to conceal one's identity is not unique to the teaching environment. Public-facing research activities, such as publication and presentation, affect individuals suffering from IP because they fear exposure. Similar behaviour may be seen at committee meetings. While these individuals are willing to serve on a committee, they often do not report committee activity (Hutchins, 2015); according to studies, organisational practices, regulations and culture impact academic personnel. Administrative staff members are also affected, and maybe more so, given the nature of the appointments (Parkman, 2016).

IP experiences among academic deans, librarians and other professionals in various areas of higher education have been studied. Most data collected during these studies suggest that gender has little effect on faculty impostor tendencies. Unless an individual is a member of a sexual minority, gender does not appear to be an issue (Crouch *et al.*, 1991; Dahlvig, 2013; Hutchins, 2015; Long, Jenkins & Bracken, 2000). For example, research indicates that one in every eight academic librarians had a high impostor score. These librarians demonstrated a penchant for second-guessing their work, an unhealthy obsession with perfection, and a fear of speaking up and expressing their ideas (Clark *et al.*, 2014). Like the IP's influence on the educational sector, it may influence other professional environments.

3.2.3 IP measuring instruments

Various instruments have been developed to measure the influence of the IP on individuals. Dr Clance created the Clance IP (CIP) Scale in 1985, the first instrument to quantify the IP's characteristics (Clance & Imes, 1978). Fear of judgement, failure, and not being as deserving as others are the worries this scale measures. The gauge can identify whether impostor-related tendencies manifest and to what extent (Hoang, 2013). The six dimensions, as indicated by Clance that define the IP are the impostor loop, superhuman characteristics, fear of failure, denying acknowledgement and denying one's potential, and performance-related anxiety and guilt. The CIP scale assesses the fear of being judged, concern about reproducing the outcome, and fear of being less proficient than others (Hoang, 2013). Clance noted that the qualities of

these dimensions' measurements would differ. At least two components must be present to suffer from impostorism (Clance & Imes, 1978).

The degree of impostor tendencies in individuals was assessed in this study using the German Impostor-Profile (IPP31). This profile is a multidimensional questionnaire with a theoretical base that may be used in research and practice. The central element traits examined using theoretically created criteria are as follows: "Competence Doubt, Working Style, Alienation, Other-Self Divergence, Frugality, and Need for Sympathy" (Ibrahim *et al.*, 2020). The association between neuroticism and discriminant measures and initial idea validity within this scale shows a positive correlation. This questionnaire evaluates the primary element characteristics related to the IP. The convergent measure of neuroticism and the discriminant measure of self-esteem were shown to have positive relationships in early concept validity testing (Ibrahim *et al.*, 2020). Furthermore, a German sample that created 31 items using "exploratory and confirmatory factor" analyses was validated.

The "Harvey Impostor Phenomenon Scale" and the "Perceived Fraudulence Scale" are two more techniques for assessing IP that have been created (Edwards *et al.*, 1987; Kolligian Jr & Sternberg, 1991).

The next section discusses the literature review on self-esteem as a research construct.

3.3 SELF-ESTEEM

"They are able
who think they are able"
Vigil

A conviction about one's value or ability is known as self-esteem (Oxford English Dictionary, 1989). Self-esteem also represents how individuals see themselves and maintain this perspective. This perspective includes feelings of worth, power, significance, effectiveness, acceptance and rejection. Various self-concepts and self-images are motivated by the desire to be accepted and included in one's social group. Self-esteem affects one's willingness for successful functioning, expertise, and success relative to other group members (Battle, 1992; Baumeister & Leary, 1995; Coetzee *et al.*, 2006). Individual self-esteem refers to a person's fundamental beliefs and feelings of value. This self-evaluative component represents cognitive, behavioural, evaluative and emotional qualities (Coetzee *et al.*, 2006; Garrety *et al.*, 2003; Leary, 1999a, 1999b). Individuals estimate their worth or value, or the extent to which they are concerned

with, agree with or comprehend esteem (Blascovich *et al.*, 1991; Button *et al.*, 1997; Eiber *et al.*, 2003; Strober, 1983).

3.3.1 Previous studies on self-esteem and its implications for employees and organisations

Self-esteem is multifaceted and has several levels (Battle, 1992). Three main components comprise total self-esteem: general, social and individual self-esteem (Coetzee *et al.*, 2006). Self-esteem frequently relates to individuals' beliefs and values, whereas social self-esteem focuses on individual ideas and feelings about peer relationships. This aspect of self-esteem significantly impacts an impostor's self-esteem (Battle, 1992). Self-esteem is a psychological term that gauges individuals' hopes for favourable results and, consequently, their propensity to interact with things and other individuals. A sense of security in one's social environment, overcoming obstacles, a willingness to engage with individuals, and balancing one's social duties and personal needs are all signs of high self-esteem (Garrety *et al.*, 2003). Because self-esteem is a socially formed and experienced sense, it is more of a barometer of well-being than a psychological characteristic (Hewitt, 2020). Although empirical study on the phenomenon's connection to self-esteem has yielded mixed findings, there is conclusive proof that the IP impacts self-esteem (Harvey, 1981; Schubert & Bowker, 2019; Topping, 1983).

For powerful role-playing and the ability to see and sympathise with the viewpoints of others, a healthy and complete sense of self is required. Individuals who are confident in themselves are more driven to raise their self-esteem, which leads to more emotionally responsible behaviour (Coetzee *et al.*, 2006; Hewitt, 2020). Individuals who lack self-confidence could exaggerate their emotional intelligence (Coetzee *et al.*, 2006; Sosik & Dionne, 1997). Low self-esteem sufferers may have incomplete self-concepts and negative beliefs and inadequately communicate positive or negative emotions. They may appear reserved and private when describing themselves, underestimating their emotional capacity (Coetzee *et al.*, 2006; Sosik & Dionne, 1997).

Individuals should experience highs and lows in their self-esteem due to acceptance or rejection (Borton *et al.*, 2012; Newman & Wadas, 1997; Noser & Zeigler-Hill, 2014; Schubert & Bowker, 2019). Receiving compliments from others promotes self-esteem (Cain *et al.*, 2008). When someone depends on the approval or judgement of others, low self-esteem is fostered. Individuals with poor self-esteem are also more likely to use self-defence than individuals with high self-esteem. These results support the notion that self-esteem is a persistent phenomenon characterised by sentiments of inalienable value (Schubert & Bowker, 2019).

Self-esteem affects individuals on various levels mentally. There is a link between self-esteem and anxiety. Anxiety is a normal response to a perceived threat (Bronzaft & Epstein, 1973). Studies show a link between anxiety and poor self-esteem (Heatherton & Wyland, 2003). Although worry and self-esteem have a definite inverse relationship, their exact nature is not entirely understood. According to research, anxiety is a mechanism that serves as a warning sign for self-system issues. The importance of preserving self-esteem, with nervous individuals progressively losing confidence and low self-esteem sufferers being too risk-averse and living in perpetual panic (Heatherton & Wyland, 2003). Research indicates that self-esteem reduces stress (Greenberg *et al.*, 1995). The finding supports the notion that under stress, those with greater self-worth outperform individuals with lower levels of self-worth (Solomon *et al.*, 1991). Additionally, as anxiety levels rise, more attention is placed on preserving self-esteem, whereas elevated self-esteem reduces perceived pressure (Wray & Stone, 2005).

Personality traits may have an impact on risk-taking behaviour. Lower-order components of the Big 5 and individual qualities include anxiety and self-esteem (Judge, Erez *et al.*, 2002; Watson *et al.*, 2002). Anxiety is a defining characteristic of neuroticism and is strongly linked to low self-esteem. Numerous studies show that the personality attribute neuroticism is mainly responsible for the difference between anxiety and self-esteem (Judge, Erez *et al.*, 2002; Watson *et al.*, 2002). Neuroticism may help explain particular distinctions between self-esteem and anxiety; research shows these variables have different consequences for taking risks (Wray & Stone, 2005). According to studies, anxiety and self-esteem are strongly correlated, with persons who experience higher anxiety being more afraid of unfavourable outcomes like social rejection (Wray & Stone, 2005). This strategy is consistent with the “sociometer theory”, which contends that negative emotional responses, such as anxiety, help a person behave appropriately and retain self-esteem by alerting them to social rejection, disapproval, or exclusion (Leary, 2005).

Research has revealed a link between perfectionism and self-esteem (Blankstein *et al.*, 2008). High levels of self-induced perfectionism have been associated with low levels of self-esteem, while the opposite is trustworthy for socially imposed perfectionism (Chrisman *et al.*, 1995; Hewitt & Flett, 1990; Schubert & Bowker, 2019; Sonnak & Towell, 2001). Researchers have found that impostorism is greatly influenced by self-esteem issues, with persons with poor self-esteem being more prone to experience impostorism (Cokley *et al.*, 2018; Neureiter & Traut-Mattausch, 2016; Parkman, 2016). The “dual-process model of perfectionism” developed by Slade and Owens (1998) suggests that healthy and unhealthy perfectionists share certain traits. Adaptive perfectionists have a higher sense of self-worth since they are motivated by praise and a desire to succeed. Misguided perfectionists are motivated by a fear of making mistakes and a desire to

avoid disappointment, decreasing their sense of self-worth (Cokley *et al.*, 2018). High personal standards, organisation, orderliness and a desire for perfection are traits of perfectionism. Maladaptive perfectionism and overly high personal standards are frequently discussed in definitions of perfectionism. While an inward feeling of intellectual phoniness drives perfectionists and impostors, perfectionists are motivated by an external impression of intellectual phoniness. In contrast, impostors are motivated by a deep feeling of intellectual fraud (Cokley *et al.*, 2018). Perfectionists strive for faultless performance, hold themselves to an exceptionally high standard, and are highly critical of their successes (Stoeber & Otto, 2006). Self-esteem is a reliable intermediary in perfectionism-related relationships (Deuling & Burns, 2017). It contains both good and toxic characteristics (Hamachek, 1978). Regular perfectionists strive for greatness without harming their mental health. Contrarily, impostors and neurotic perfectionists establish practically impossible objectives with minimal context-specific flexibility, which leads to their ongoing anguish as they fall short of their lofty standards (Cokley *et al.*, 2018). This pathological perfectionism is connected to anxiety and hopelessness (Black & Reynolds, 2013).

Self-esteem affects an individual's self-perceptions: Self-regulation abilities are crucial because they might influence a person's subsequent reactions depending on their justification for the accomplishment or failure of their self-regulation endeavours. Competence may impact explanations and causes of success and failure. Self-efficacy beliefs can influence attributions and vice versa (Russell & Worsley, 2013). For instance, individuals with a high level of self-efficacy in a given activity are more inclined to attribute their achievement to personal qualities than outside factors (Bandura, 1989). Self-regulation persistence is less likely to be caused by external circumstances rather than by attributing success to human traits (Wigfield *et al.*, 2011). The capacity to make judgements and work through issues in the actual world is necessary for self-regulation. Self-efficacy beliefs may impact the effectiveness and efficiency of decision-making and problem-solving. Individuals who are confident in their ability to solve issues and make judgements using their cognitive resources act more effectively than those who doubt their abilities when confronted with challenging situations and decisions (Kim & Sohn, 2019). More success and better solutions are frequently the outcomes of these types of efficiency.

Self-esteem is a person's attitude toward themselves; it is influenced by how they see themselves, interact with others, and what the future may hold (Lopez & Snyder, 2003). A person's view of themselves indicates their attitude of approbation and demonstrates the extent to which they think they are capable, significant, successful, and deserving (Coopersmith, 1967). Individuals with low self-esteem negatively evaluate themselves even when they believe they are competent. In

contrast, individuals with high self-esteem are confident in themselves regardless of how they see their traits, talents and abilities (Chen *et al.*, 2004; Park *et al.*, 2018).

It is essential to understand the difference between self-esteem and self-concept. *Self-concept* is the idea of who you are. The cognitive ideas individuals have about themselves are their self-concepts; they include everything known about them, including their name, race, likes, dislikes, beliefs and values (Heatherton & Wyland, 2003; Moran, 2015). *Self-esteem* refers to the emotional reaction one has while thinking about such cognitive ideas. Aspects of one's self-concept can impact one's self-esteem but are not the same (Heatherton & Wyland, 2003). Performance, social connection and physical attractiveness are the key factors that makeup self-esteem. Performance self-esteem is a person's assessment of their competence, which includes their cognitive ability, social performance, ability to control their emotions, self-confidence, efficacy and agency. Intelligent and competent individuals have high self-esteem (Heatherton & Wyland, 2003). *Social self-esteem* is a person's perception of how others see them; this perception has greater weight than reality. Individuals who feel that others love and appreciate them have solid social self-esteem. Individuals who struggle with anxiety and self-consciousness often have low social self-esteem (Moran, 2015). The last feature relates to how someone feels about their physical appearance and includes views like athletic ability, body image, beauty, and opinions on race and ethnicity (Heatherton & Wyland, 2003).

Gender affects self-esteem in different ways. According to research, men and women derive their feelings of value from many sources. Relationships and financial success affect men and women differently; men get self-esteem from moving up, while women do so from getting along (Heatherton & Wyland, 2003). This aspect of self-worth influences subsequent behaviour. Men who excel in arithmetic and have strong self-esteem are better equipped to use performance behaviours like work skills. Women engage better in social activities, such as meeting new individuals in satisfying relationships (Heatherton & Wyland, 2003; Moran, 2015). Poor self-esteem results from a wrong perspective of oneself reflected in one's fundamental beliefs. Therefore, self-esteem is a cognitive process, even though it can take many forms and affect emotions, physical health, and behaviour (Kazantzis & L'Abate, 2007).

3.3.2 Implications of self-esteem for Managers/Leaders

Self-worth influences leadership behaviour. According to some definitions, leadership is a behavioural activity with an interpersonal focus that aims to inspire and motivate others to work together toward common goals (Grojean *et al.*, 2004). It is emphasised that leaders must ensure

that their organisations are productive and morally honest (Engelbrecht *et al.*, 2017). Self-esteem affects an individual's leadership ability. Scholars have found that genetic and developmental factors influence individuals' advancement to leadership positions. Studies show that self-esteem favourably correlates with many leadership characteristics (Gist & Mitchell, 1992). Research has extensively established the importance of developmental experiences, feedback and individual diversity in leader development (Li *et al.*, 2011). Self-esteem plays a role in the growth and progress of leaders. Individuals who are confident in themselves are more inclined to seek feedback, which aids in developing leaders, than individuals who do not. Self-esteem has been developed to decide whether to accept a leadership position (Atwater & Waldman, 1998). Self-acceptance, drive, close working connections, and independence are likely boosted by a leader's capacity to accept individuals for who they are, be present, cooperate with co-workers, trust others, and operate without continual approval and praise (Bass & Bass, 2009). Individuals who lack self-confidence are more inclined to respond because they are anxious about making mistakes (Tramèr *et al.*, 2020).

Individuals with high self-esteem tend to defend themselves against pressure and unfavourable criticism. As a result, individuals are more motivated to assume leadership roles and work overtime to increase their sense of self (Grant & Shandell, 2021). Self-improvement is a top priority for those with high self-esteem because they want to keep feeling valuable and productive. Additionally, compared to those with low self-esteem who are more susceptible to cues from the outside environment, such as unfair treatment from others, they are more likely to act following their self-evaluation (Gardner *et al.*, 2004).

Although self-esteem and self-efficacy are firmly linked, they are two different concepts (Lent & Fouad, 2011). Self-esteem is a vital aspect of life that affects many aspects, including performance and employment. Self-esteem predicts self-efficacy in professional decisions (Betz *et al.*, 1996). Self-efficacy is better understood by persons with great self-worth than those with little self-worth. The confidence that one will achieve in their pursuits is known as self-efficacy (Bandura, 1989). Employees' opinions of their worth and merit as teammates and their self-perceived value to the company are called organisational self-esteem (Bellou *et al.*, 2005). According to the self-consistency theory, an individual's commitment to changing real-world work behaviour will likely be motivated by self-evaluation as a significant and competent organisational member (Gardner *et al.*, 2004).

Employees with greater organisational self-esteem than those with lower levels may behave creatively and innovatively within an organisational context. With high organisational self-esteem,

individuals may resolve conflicts and uphold their self-worth as valued corporate members by exhibiting IWBs in a setting with expanded role definitions and unforeseen job-related problems (Ojedokun, 2012).

Research has shown their link to academic success and the significance of self-efficacy and self-esteem affecting emotional components in academic environments (Asakereh & Yousofi, 2018; Bhagat, 2016; Clemes & Bean, 1990). Studies have also shown that reflective thinking and academic achievement are closely related (Ghanizadeh, 2017). Several academics have stressed the value of reflective thinking on students' task performance (Van Velzen, 2017).

Psychologists once believed that having a solid sense of self was advantageous and that having a poor sense of self damages an individual; however, a more recent view of self-esteem restricts the benefits of high trait self-esteem to more initiative and satisfaction (Baumeister *et al.*, 2003). These experts think that psychological professionals should focus more on how individuals pursue self-esteem and less on boosting an individual's esteem levels.

Self-compassion, a self-esteem alternative, can assist individuals in obtaining many advantages without any disadvantages (Crocker & Park, 2004). Even if it is not necessarily more flexible, research has shown that having higher self-esteem can help guard against several mental illnesses, such as anxiety and mood disorders (Bandura, Freeman *et al.*, 1999; Greenberg *et al.*, 1995). According to Crocker and Park (2004), those confident in themselves could become more competitive, show less care for the group's welfare, and interact with others adversely. It also connects to self-focus, interpersonal connections and accomplishing objectives.

3.3.3 Self-Esteem Measuring Instruments

Various instruments have been developed to measure the influence of self-esteem on individuals. The Coopersmith Self-Esteem Inventory (CSEI) is a widely used self-report questionnaire that assesses self-esteem across four domains: general, social, familial and academic/vocational. Stanley Coopersmith developed the CSEI in the 1960s and has been revised several times since then. The CSEI consists of 58 items, each with two statements that describe opposite attitudes. Respondents choose the statement that is most like them and the one that is least like them. For example, the item "I feel that people, in general, are friendly" is paired with "I feel that people in general are unfriendly." Respondents choose the statement that is most like them and the one that is least like them. The 58 items are grouped into four scales: general self-esteem, social self-esteem, familial self-esteem and academic/vocational self-esteem. Scores for each scale range

from 0 to 20, with higher scores indicating higher levels of self-esteem. The CSEI can be scored for each scale separately or for an overall score that reflects general self-esteem (Johnson *et al.*, 1983).

In this study, the Rosenberg self-esteem scale was used. This ten-item self-assessment places a strong focus on overall self-esteem. It consists of ten assertions about someone's overall worth or acceptability, measured on a four-point scale; the replies are evaluated from strongly agree to disagree (Sinclair *et al.*, 2010). Because self-esteem is not a single concept, it has been divided into two equally weighted 5-item components: self-competence and self-liking. *Self-competence* is viewed as a person's usefulness and can be defined as the conviction that one is competent and successful. *Self-liking* is the perception of one's inherent worth. Self-liking is enjoyable and socially relevant (Schmitt & Allik, 2005).

The following section presents the literature review of decision-making self-efficacy as a research construct.

3.4 DECISION-MAKING SELF-EFFICACY

“It is not what you are that holds you back,
It is what you think you are not.”
Denis Waitley -

The ability to make decisions, including group decision-making, is decision-making self-efficacy (Oxford English Dictionary, 1989). Making decisions is an essential managerial duty for managers; it is the essence of management, and these decisions impact all organisational activities and outcomes (Dean Jr & Sharfman, 1996; Rus *et al.*, 2019). Conceptually linked to assertiveness, decisiveness has been recognised as a critical leadership quality. Leadership decisiveness is how a leader attempts to make decisions and act decisively (Atwater *et al.*, 2009).

Indecisive leadership contributes to organisational failure, whereas a decisive leader's actions are communicated clearly and precisely (Kapucu & Ustun, 2018). A leader's success depends on their ability to make good decisions. For example, collaborative leadership qualities are required for crisis management. Leaders may be required to make rapid and effective decisions based on limited knowledge under challenging conditions caused by a crisis (Sayegh *et al.*, 2004). In this scenario, emotions and instincts may easily defeat logic and thinking. To reduce the impact of these challenging events, a successful leader must take many steps and make vital decisions before, during and after these events (Kapucu & Ustun, 2018). The IP may affect the leader's logic and thinking, thus affecting the outcome of their decision-making.

3.4.1 Previous studies on decision-making and its implications for employees and organisations.

Decision-making is a complex process containing both logical and irrational elements. Making decisions is a challenging process that calls for strategic thinking to overcome a current problem (Bratianu *et al.*, 2018; Johnsen & Glick, 2016; O'Brien, 2012). Making complex judgements requires thoughtful and planned actionable thought (Rus *et al.*, 2019; Yagnik & Chandra, 2019). The fundamental principle of decision-making models is that logical judgements result in action. Decision-making models combine limited rationality with probabilistic thinking since leaders frequently lack full knowledge and expertise in real-world situations (Bratianu *et al.*, 2018; Davenport & Prusak, 1998; Hallen & Pahnke, 2016; Nonaka, 1994; O'Brien, 2012).

Decision-making processes are complex. Making decisions is crucial to managing an organisation. It involves consciously choosing a course of action from the options available to attain the intended outcome (Harrison & Pelletier, 2000). It is one of the most complicated cognitive processes for humans since it includes several situations and actions, all of which have different effects. Making a decision involves recognising the need for a decision, acquiring information, and considering several options (Omarli, 2017).

The decision-making process can be depicted in various models. Simple decision-making models outline the actions individuals must take. The stages of the decision-making process have been variously categorised by authors (Omarli, 2017). The initial step involves identification, decision-making elements and execution, as shown in Figure 3.2.

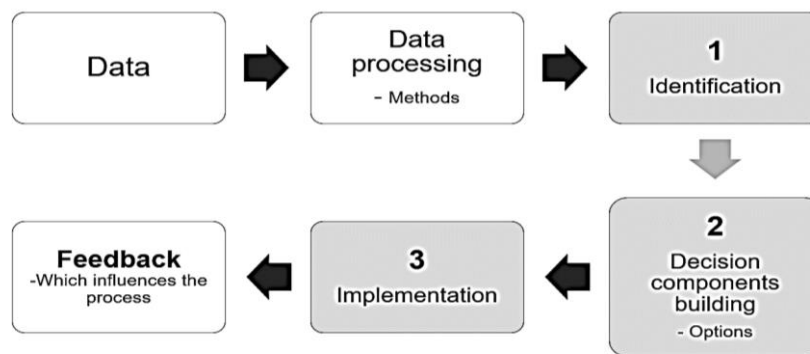


Figure 3.2: The Three-Step Decision-Making Model

Source (Omarli, 2017)

- Step 1: Identification: The first step extensively studies the problem. The leader gathers information from different sources, applies mathematical and statistical methodologies, and uses the results to make decisions. A support system can gather and analyse data within the organisation.
- Step 2: Building decision-making components: The management examines all potential combinations, constraints and limitations for every feasible option while evaluating alternatives. Following that, statistical and mathematical equations are investigated. The result is a list of choices with associated success probabilities.
- Step 3: Implementation: The leader develops an implementation plan based on facts and arguments during decision-making. Actions must be completed in a predetermined order to build a firm foundation for the decision.

Strategic decision-making is an iterative process, and the steps may not always follow a linear progression. The process often involves feedback loops, revisiting earlier steps, and making adjustments based on new information or changing circumstances. The circular diagram in Figure 3.3 depicts this iterative process.

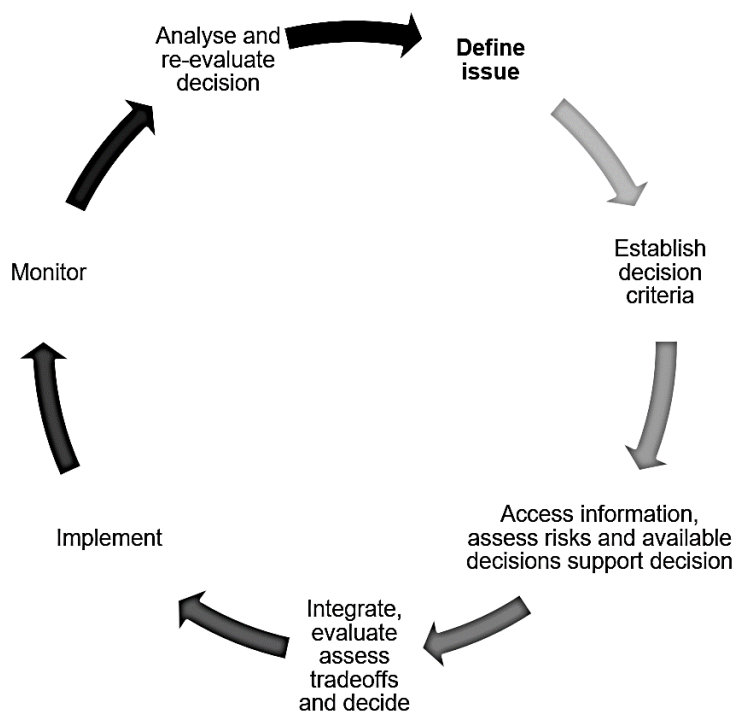


Figure 3.3: Strategic Decision-Making Framework

Source: (Allen and Coates, 2009)

The steps in the process are set out briefly below:

- Define the issue: This step involves identifying the specific issue or challenge that requires a strategic decision.
- Relevant data is collected, and a comprehensive analysis of the internal and external factors that may impact the decision is conducted. This could include an internal environmental analysis, e.g. a SWOT analysis (strengths, weaknesses, opportunities and threats) and an external environmental analysis considering the PESTEL factors that impact the organisation.
- Based on the analysis, a range of strategic alternatives or options that could address the identified objective would be generated. This step involves brainstorming, exploring various possibilities, and considering different approaches or courses of action.
- Each strategic alternative's potential benefits, risks, feasibility, and implications are assessed and evaluated using decision criteria such as cost-effectiveness, alignment with organisational goals, market potential, resource requirements, and risk analysis to compare and rank the alternatives.
- The most appropriate strategic alternative based on the evaluation is then selected. This step involves making a judgment call, considering both the objective analysis and subjective factors such as intuition, experience, and organisational values. It may also involve seeking input from key stakeholders and decision-makers.
- Once the decision is made, a detailed plan can be developed to implement the chosen strategy. This includes identifying specific actions, allocating resources, setting timelines, and assigning responsibilities. The plan should address potential barriers, risks, and contingencies.
- The strategy should then be implemented according to the plan and closely monitored by tracking key performance indicators, measuring outcomes, and assessing the strategy's effectiveness. This step involves managing resources, addressing challenges, and making necessary adjustments as the strategy unfolds.
- Finally, the results and impact of the strategic decision should be continuously evaluated to assess whether the desired outcomes are being achieved and if adjustments or improvements are needed. Learning from the decision-making process helps inform future strategic decisions and enhances the organisation's ability to adapt and grow.

This operational aspect of decision-making highlights the time-dependent repercussions and complexity of component aspects that affect the effectiveness of management decisions and choice-making (Gabrielsson & Politis, 2011; Hough & White, 2003; Papadakis & Barwise, 2002;

Schneider & Barnes, 2003; Wood *et al.*, 1990; Wood *et al.*, 2000). It also emphasises the intricacy of the component components and their time-dependent effects on the effectiveness of management decision-making and upcoming decisions (Hough & White, 2003; Myburgh, 2010). Efficient management decision-making can be depicted in various models. According to Bandura, the social cognitive theory has advantages over earlier models of efficient management decision-making. It is not constrained by the idea that steps in corporate decision-making processes like search, appraisal and selection must happen in order. The social cognitive theory investigates social processes, such as the reciprocal causality between a person's cognition and other characteristics, behaviour and environment. (Bandura, 2006).

The social cognitive theory acknowledges the self-regulatory components of leveraging human capabilities in management decision-making. According to this theory, management decision-making is an interactive process influenced by various factors that impact other variables, human behaviour and the environment. Social cognition theory is advantageous because it offers a simple conceptual framework for identifying material outcomes and evaluating human factors' interdependencies and cumulative influences, decision-making processes and environmental constraints (Myburgh, 2010).

Academics who use social cognitive process theories acknowledge the influence of historical circumstances on decision-making processes. Many decision-process theories, including "Janis and Mann's Conflict Model," "Forgas' Affect Infusion Model," and "Payne, Bettman and Johnson's Adaptive Decision-Maker Model," contend that individuals use various decision-making techniques depending on their circumstances, their employment, and their preferences (Forgas, 1995; Janis & Mann, 1977; Payne, 1997). Individuals make judgements depending on a range of criteria, and adopting contingent decision procedures is an adaptive strategy to satisfy demands, according to the core ideas of these theories. Additionally, these models' central tenet is that, for decision-making to occur, objectives and finite attentional resources must adjust to one another. According to a social-cognitive perspective, this study views the decision-making process as interactive and impacted by the organisational environment and the decision-makers concerns (Bandura & Jourden, 1991; Myburgh, 2010).

Different personality characteristics impact decisions. The IP significantly impacts a leader's personality, affecting other vital aspects. The total of a human being may be apprehended as the total of the epistemic, pragmatic and axiological functions through personality. Twenty personality characteristics that impact decisions have been identified, and they are identified as follows (Rus *et al.*, 2019). These characteristics are summarised in Table 3.1.

Table 3.1: Personality Characteristics that Impact Decisions

PERSONALITY TRAIT	DESCRIPTION
Availability	Personal characteristics and characteristics underpin and contribute to the acquisition of status and success symbols. Gregariousness, outgoing, social and participatory temperament are all aspects of sociability. In personal and social interactions, social presence refers to factors such as poise, spontaneity and self-assurance.
Self-Acceptance	A sense of personal value, self-acceptance and the ability to think and act independently.
Independence	To distinguish self-sufficient, self-assured and resourceful individuals who are not necessarily affiliated.
Empathy	The ability to naturally think about others and understand their thoughts and attitudes. Identification of one's level of conscientiousness, responsibility, and dependability Individual's social maturity, integrity and rectitude, as measured by socialisation.
Self-Control	This scale measured one's capacity for restraint, self-regulation and freedom from impulsivity and self-interest.
Good Impression	Evaluates a person's capacity to leave a good impression on others and their self-consciousness.
Communality	The commonality is the degree to which a person's actions and reactions follow the inventory's modal or expected pattern.
Sense of Well-Being	It reveals individuals who are often devoid of self-doubt and disappointment and have fewer worries and concerns.
Tolerance	This is defined as recognising lenient, tolerant and non-judgemental societal views and attitudes. Identifying the variables of interest and motivation assists in accomplishing any situation where conformity is desirable.
Individual's personal and Intellectual Efficiency	To determine the individual's level of personal and intellectual efficiency.
Psychological – Mindedness	Individuals are interested and sensitive to other individuals' inner needs, intentions and experiences.
Flexibility	Refers to how adaptable and flexible an individual's mind and social conduct are.
Masculinity/Femininity	Individuals are interested and sensitive to other individuals' inner needs, intentions and experiences.

According to data, leaders' decision-making is filtered and organised as intuition. The importance of knowledge dynamics has been largely ignored in research on decision-making in economics and management, focusing primarily on logical or intuitive reasoning (Dane & Pratt, 2007). The

foundation of the most well-known decision-making theories is that a logical decision results in a specific behaviour. Leadership decision-making models combine a restricted rationality approach with probabilistic thinking. Thus leaders do not consider all the information and knowledge readily available (Bratianu & Andriessen, 2008).

Decision-making is a process. Decision-making is complicated, including rational and non-rational elements. Traditional university education emphasises a sensible approach based on economic principles and mathematical modelling, whereas behavioural economics adds new variables derived from cognitive and strategic sciences (Bratianu *et al.*, 2018; Johnsen & Glick, 2016; O'Brien, 2012). According to cognitive scientists, decision-making is neither wholly logical nor entirely intuitive, like the IP's influence. It is a complex cognitive process that relies on dynamic relationships and intellectual, emotional and spiritual knowledge (Bratianu *et al.*, 2018).

Decision-making is a complex phenomenon that demands strategic thinking to solve a present issue. Making decisions under challenging situations necessitates careful and actionable strategic thinking (Yagnik & Chandra, 2019). These recent discoveries suggest two styles of thinking: reflective and intuitive. Both systems are always in communication and complement one another. The dominating variable in the deliberative system is rationality, and thought is methodical, slow and careful. The emotional variables are the most important in the intuitive approach and are influenced by our direct experience with the actual world (Hallen & Pahnke, 2016; O'Brien, 2012). This is also surprisingly like the IP influence, as it only manifests in certain circumstances and emotions experienced.

The knowledge dynamics regulate this relationship since all decision-making is based on information and knowledge processing. However, previous studies are scarce on knowledge dynamics in decision-making based on explicit and implicit data (Davenport & Prusak, 1998; Nonaka, 1994; Nonaka & Takeuchi, 1995). Detailed knowledge refers to knowledge that can be articulated and transmitted using natural or symbolic language. Because it is born through direct contact with the world, tacit knowledge is more difficult to describe; this category of expertise includes subjective insights, intuitions and hunches. Explicit knowledge influences the perception of an individual who suffers from the IP to perceive their surroundings.

Further, tacit knowledge is deeply ingrained in a person's experiences, behaviours and beliefs. It is also deeply ingrained in the person's feelings or emotions (Bratianu *et al.*, 2018; Nonaka & Takeuchi, 1995). In the IP, the individual's knowledge is explicit and implicit information. This information should suggest that they feel they belong in the situation; however, psychologically,

they do not. The most prevalent representation of decision-making understands action as a rational choice. Making decisions in ambiguous situations is a critical cognitive activity linked to thinking in which we choose from various options (Serrat, 2017). The decision-makers lack the necessary knowledge and awareness of their alternatives and possible effects. As a result, limited rationality manifests itself in real-world decision-making. Bounded rationality is used in most economic and corporate decision-making theories today (Güth & Kliemt, 2017; Takahashi, 2015).

Decision-making is intuitive and can be defined as how we turn our experience into action. Leaders strive for the “good enough” option rather than the best feasible solution within the bounds of reason because they are constrained in their search by incomplete knowledge and an inability to perform extensive studies of all potential alternatives with all potential implications (Bratianu *et al.*, 2018). The knowledge of the situation assists leaders in determining the status of the problem and how to respond (Klein, 2004). As a result, intuition performs the role of a pattern recognition system (Bratianu *et al.*, 2018). Decision-making based on personal experience is intuitive if reflective decision-making is based on limited reason (O’Brien, 2012). While limited rationality moderates the impact of explicit or logical information on decision-making, intuition moderates the effect of tacit knowledge, particularly the emotional component (Bratianu *et al.*, 2018). Should the IP influence this unique experience, it may significantly impact the outcome of a leader’s decision choice. Tacit information is stored in the brain and body of an individual because of direct experience and is constantly examined in decision-making to identify comparable facts or circumstances. This process is called “thin-slicing” (Gladwell, 2005). Thin-slicing refers to our subconscious’s capacity to discover patterns in events and behaviour based on tiny slices of experience.

Bratianu and Andriessen (2008) suggested using the energy metaphor to approach knowledge. The metaphor represents knowledge in three types: logical, emotional and spiritual. Entropic knowledge dynamics occur when one kind of knowledge is transformed into another. The irreversibility of knowledge changes is highlighted by entropy (Georgescu-Roegen, 2013). These entropic knowledge dynamics have been demonstrated in cognitive sciences and are believed to be critical in all decision-making processes. Due to its impartiality, analytical knowledge was the only kind available for a long time. Reflection is the foundation of knowledge, not perception, and perception is not knowledge. Analytical knowledge is tied to explicit information in knowledge management and comes from logical reasoning (Becerra-Fernandez & Sabherwal, 2010; Davenport & Prusak, 1998; Nonaka & Takeuchi, 1995). In the mind, emotional knowledge appears as a sensation of knowing. It consists of shared principles that enable us to collaborate and make decisions (Ekman, 2003; Goleman *et al.*, 2013; Mayer *et al.*, 2004; Nonaka & Takeuchi,

1995). The IP influences this information, which also affects the goals of those who experience it concerning the individuals they work with. When evaluating the whole range of information, entropic knowledge dynamics seem to include the core of the mental decision-making process. There seem to be limitations due to limited reasoning and intuition (Bratianu *et al.*, 2018).

Individual differences have been studied to influence leadership effectiveness. The Big Five personality test is a well-known, simple-to-understand and current assessment method frequently used in research. These five characteristics, “openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism”, are all associated with effective leadership (Özbağ, 2016). The most significant relationships between leadership emergence and traits were extroversion and conscientiousness, with agreeableness having a weak relationship (Judge, Bono, *et al.*, 2002). Confidence has been linked to the emergence of leadership and followers’ self-efficacy views (Hallo *et al.*, 2020). Six personality profiles among senior leaders can be identified based on the Big Five personality dimensions research. Conscientiousness is a personality quality that describes careful or precise behaviour. Conscientiousness is a desire to achieve well and take one’s responsibilities seriously. Conscientious individuals are more efficient and organised than careless and disorganised individuals (Köseoglu, 2016). Extroversion is the attribute of being outgoing and diverting attention away from oneself. This personality type is characterised by sociability, assertiveness, talkativeness and excitability; extroverted individuals like connecting with others and seeking social stimulation. The IP influences leadership effectiveness by influencing both extroversion and conscientiousness. Making decisions entails analysing options and selecting one to proceed with. Decisions are made using mental processes (Milkman *et al.*, 2009). These processes can be logical or irrational, influenced by explicit and implicit knowledge and one’s belief system.

Numerous factors affect decision-making. Numerous studies have been undertaken on personality differences, decision-making ability and other instruments. Ethical decision-making, logical decision-making, strategic decision-making, biases, and ambiguity have all been studied by researchers (Hallo *et al.*, 2020). There have been studies on individual vs. collective decision-making in various settings, including business, health and education.

There are several theoretical stances and comprehensions of decision-making. Studies on generic decision-making have revealed several themes. According to research, individuals make confident decisions based on previous experiences in similar scenarios. Individuals with the necessary experience and knowledge of previous successful decisions make better judgements than those without (Hallo *et al.*, 2020). As bounded rationality emphasises, individuals are

frequently forced to make judgements with limited resources, time and cognitive ability to deal with complexity. It is erroneous to believe that optimising decisions in complicated settings is possible (Mellahi & Collings, 2010).

The rational choice theory indicates that sound decisions are formed by examining all relevant factors, assessing the likelihood and selecting the best alternative. If this is not achievable, satisficing will be required. Satisficing entails reviewing all available options until the optimal solution for the situation is determined (Hallo *et al.*, 2020). The IP may considerably impact this process, as those who suffer from it are affected by internal conflict rather than reasonable views. The IP affects individuals' emotions and may significantly impact their decision-making. Some researchers say emotions and intuition positively impact decision-making (Loewenstein *et al.*, 2001). Emotions may be helpful since they may assist individuals in processing important information and making sense of complex situations (Hallo *et al.*, 2020).

Conscious cognitive processes that consider information from the immediate environment make up the decision-making process. Making decisions entails engaging in a situation where an issue has to be solved and a person who wants to do so (Omarli, 2017). A variety of environmental and psychological elements have an impact on management decision-making. Numerous scholars have categorised decision-making as one of the continuous leadership functions, which, together with the sequence functions, make up complex leadership functions. It is critical in management because leaders' decisions have a cumulative effect across various environments (Frankovsky *et al.*, 2017).

3.4.2 Previous studies on self-efficacy and its implications for employees and organisations.

Self-efficacy is a crucial self-concept linked to productivity and finishing activities connected to the workplace. Self-efficacy, which has to do with a person's perception of the legitimacy of their task, is the conviction that one can accomplish and provide the anticipated performance. Whether true or false, the person's vision becomes their reality. Thus, their self-efficacy significantly impacts how they behave in terms of organisations. Individual viewpoints on the job are crucial, as is how well a person feels fit within the workplace. Self-efficacy is another essential self-concept linked to productivity and completing activities connected to the profession (Bandura, 1977; McDowell *et al.*, 2015).

The IP may influence self-efficacy in the workplace. Individual judgements about the authenticity of their workplace can significantly impact their future organisational behaviour. Personal perspectives on work and an individual's perceived fit within that work environment are crucial and have been the subject of much research (McDowell *et al.*, 2015). The IP affects how individuals perceive their performance in a particular performance group, impacting their self-efficacy. Despite their triumphs, they do not have the chance for their self-efficacy to increase. They do not believe they can perform at a high level. Researchers have used attributes like self-efficacy and perceived organisational support to understand better how individuals behave at work (Zinko *et al.*, 2007).

The inverse association between self-efficacy and the IP supports the link between self-efficacy and perceived organisational support. Despite their expertise and talents, those who encounter the IP will undoubtedly have poor self-efficacy, presenting them with professional difficulties – these individuals who receive high organisational support experience minor IP influence. Supportive groups may relieve some of the negative consequences of poor self-efficacy by mitigating the impostor effect (McDowell *et al.*, 2015).

Self-efficacy plays a role in self-regulation. One must fully comprehend the theoretical underpinnings to understand the role of self-efficacy beliefs in self-regulation. Self-efficacy theory suggests that individuals actively alter their circumstances rather than passively reacting to them, which complements social cognition theory (Bandura, 1986; Ozyilmaz *et al.*, 2018). According to social cognitive theory, individuals have an enormous cognitive or symbolic capacity to build internal experiences. Individuals can use this skill to study and evaluate their ideas, behaviours and emotions, devise new action plans, anticipate occurrences, and test and evaluate their predictions (Maddux & Volkmann, 2010). External events are inextricably linked to human traits such as intelligence, emotion, bodily functions and behaviour. Individuals respond to external stimuli in three ways: cognitively, emotionally and behaviourally. Individuals can also influence their behaviour through cognition, impacting their environment and cognitive, emotional and physical states. Self-regulation is based on the ability to foresee or set expectations; it is the capacity to build thoughts about upcoming events or circumstances and one's skills and behaviour using knowledge and experience gained in the past (Maddux & Volkmann, 2010; Porter *et al.*, 2003).

Overestimating one's talents enhances the drive to finish challenging activities and achieve ambitious objectives, which become self-fulfilling prophecies when individuals set lofty goals, persist and surpass their past success levels (Schunk & DiBenedetto, 2020). Self-efficacy beliefs

affect an individual's objectives: the more daring one's goals are in a particular achievement domain, the better one's self-efficacy (Bandura, 1997). Attitudes of self-efficacy can impact and change causal attributions. Causal attributions are used to explain events like acts and consequences. As a result, self-regulation qualities are critical because an individual's reasoning for self-regulation success or failure might influence subsequent behaviour. Self-efficacy beliefs can affect the causes of success and failure and the attributions and behaviours made in response to these events (Russell & Worsley, 2013). Individuals with high self-efficacy are more inclined to attribute their achievement to personal attributes rather than external circumstances when doing a task (Bandura, 1989).

Self-regulation persistence is more likely when performance is attributed to human capabilities rather than external circumstances (Wigfield *et al.*, 2011). For self-regulation to occur, decision-making and problem-solving abilities are required. It has been shown that self-efficacy beliefs influence how successful individuals make decisions and solve issues. Others who are confident in their capacity to make judgements and resolve problems when confronted with challenging scenarios and options use their cognitive resources more effectively than individuals who are unsure of their skills (Kim & Sohn, 2019). When faced with challenges, those with greater self-efficacy are more likely to stay task-diagnostic and persistent in their quest for answers. The efficiency of this nature typically leads to more success and better solutions. Individuals lacking self-efficacy, such as those with IP, are more likely to self-diagnose and dwell on their shortcomings, diverting their attention from exploring and fixing the current problem (Bandura, 1989; Russell & Worsley, 2013).

Self-efficacy can affect an individual's emotional state of mind. Self-efficacy beliefs influence how individuals respond emotionally to difficulties and perceived discrepancies between goals and performance. Compared to those with lower levels of self-efficacy, those with higher levels of decision-making may be less prone to post-decision self-regulatory tiredness. Making confident selections and decisions may require less work than uncertain ones (Russell & Worsley, 2013). Individuals try to control their behaviour by learning about or receiving feedback on their advancement or regression toward a goal. Both the natural environment and other individuals supply information. Individuals must consider feedback and change their behaviour as necessary (Locke & Latham, 1990).

Individuals not only analyse data but also interpret it. Each person hears and responds differently to the same message on their progress toward or away from a goal. When presented with challenges, those with low self-efficacy are more likely to doubt their ability to finish the job,

whereas individuals with high self-efficacy continue to do so (Hutchison *et al.*, 2006). A person with a strong sense of self-efficacy is less likely to suffer anxiety or sadness than someone with a poor sense of self-efficacy due to difficulties, interruptions, and perceived failures in self-regulation (Bandura, Pastorelli *et al.*, 1999). Individuals with impostor thoughts frequently make unfavourable comparisons and fear that others will assume they are less competent than their peers; hence, self-efficacy may be associated with the IP (Clance, 1985).

Research indicates that modelling, self-correction in response to feedback, and understanding of consequences contribute to learning; this is the same for an individual who suffers from IP (Bandura, 1977). Such an individual's behaviour alters because of knowledge and perception of their situation. Like other individuals, motivation and other cognitive processes are essential for developing and sustaining particular behaviours (Bandura, 1986; Roskowski, 2010).

Self-efficacy can affect an individual's expectations. Bandura also created the phrase "*efficacy expectations*," which refers to psychological techniques that establish or reinforce ideas about an individual's potential to do a task successfully. According to Bandura, efficacy expectations affect a human's activities (Bandura, 1977). The extent to which an individual's efficacy expectations are fulfilled dictates their willingness to perform an activity; when individuals have high efficacy expectations, their behaviour changes because learning, motivation and other cognitive processes are required to acquire and maintain behaviours. Individuals with higher efficacy expectations are willing to take on more complex tasks and use much effort to accomplish their goals (Bandura, 1986; Roskowski, 2010).

Bandura stressed the significance of efficacy expectations, stating that effective performance needs more than knowledge and abilities. Self-medicating beliefs are employed to self-medicate the knowledge-behaviour connection (Bandura, 1982). In other words, motivation and course of action are influenced by one's opinion of one's skills. Effective performance requires efficacy expectations, confidence in one's skills, outcome expectations, or the conviction that particular activities will lead to a given outcome (Bandura, 1986; Roskowski, 2010).

Bandura defined perceived self-efficacy as assessing an individual's ability to do essential activities despite foreseeably difficult circumstances (Bandura, 1982). Individuals conduct self-evaluations for several purposes. An individual could, for instance, refrain from acting in ways they feel are beyond their capacity. Individuals confident in their abilities will put more effort into finishing tasks (Bandura & Cervone, 2000). Individuals confident in their abilities but unclear about how complex the project will be will work harder to complete it (Bandura, 1982). As a result,

perceived self-efficacy rather than actual performance affects behaviour (Bandura, 1977). Self-efficacy, as seen, acts as a bridge between information and action. One may argue, for example, that as individuals afflicted by the IP acquire experience, their abilities expand, and they develop the notion that they can succeed (McNeill *et al.*, 1992).

Self-efficacy can affect an individual's achievements. The self-efficacy theory and research focus on individuals' self-regulating abilities. Self-efficacy gauges a person's ability to carry out the required activities to achieve specific goals (Bandura, 1989). Affect motivation and achievement; for example, encouragement, locus of control, and learning to assist lessness all affect an individual's belief in their agency and its effect on psychological well-being and accomplishment (Gurefe & Bakalim, 2018; Maddux & Volkmann, 2010; Rhew *et al.*, 2018; Saeid & Eslaminejad, 2017; Thompson *et al.*, 2020).

Self-efficacy holds that individuals' abilities influence their knowledge and capacity to perform worldwide. These perspectives assess how well we can apply our skills in diverse situations. Self-efficacy beliefs are perspectives on what we can do with our skills and abilities in specific contexts and circumstances instead of decontextualised assessments of capacities apart from their surroundings (Judge, Bono, *et al.*, 2002; Maddux & Volkmann, 2010).

The behavioural outcomes of engagement, tenacity, strategy utilisation, anxiety reduction and task performance correlate with self-efficacy (Adesola & Li, 2018). Self-efficacy is linked to greater cognitive flexibility even when capacity is limited because of practical goal-setting, resistance to negative feedback and self-regulation (Moen & Federici, 2012).

Self-efficacy affects an individual's confidence. Self-efficacy is a more accurate measure of a person's capacity to execute a task than self-esteem or confidence. Self-efficacy is more focused and limited than self-confidence and self-esteem. As a personal quality, self-efficacy is neither defined nor measured. Any psychological idea may be characterised and rated on a scale from specificity to trait-like generalisation (Jaaffar *et al.*, 2019). Setting more challenging task objectives and enhancing job performance were also correlated with increased conscientiousness, extraversion and neuroticism. Since their primary incentive is to avoid failure and dejection, individuals with high neuroticism, such as those who experience the IP, may set less explicit and challenging objectives than individuals with low neuroticism (Judge, Erez, *et al.*, 2002).

Goals that are poorly defined and overly challenging are less likely to be achieved and, as a result, are less likely to increase self-efficacy (Ionescu, 2017). It will thus affect the choices that folks

who experience the IP make, such as whether they engage in things they are confident in and avoid those they are not (Yamini & Mandanizadeh, 2011). Task-diagnostic behaviour increases self-efficacy, which increases the chance of success. Because rumination, which entails being fixated on one's threats, is linked to neuroticism, individuals who are more neurotic are more inclined to self-diagnose (McCrae & Costa Jr, 1989). Instead of performing work diagnostics, these individuals usually inquire whether the circumstance is troublesome. When faced with self-regulation issues and setbacks, they are reluctant to decide how to fix the problem (Maddux & Volkmann, 2010).

According to research, those who are more conscientious and outgoing and have a lower level of neuroticism have an easier time developing strong self-efficacy (Sui *et al.*, 2021). Individuals with a higher level of conscientiousness are less prone to wait, more inclined to persist in facing obstacles, and more capable of postponing or suppressing gratification than those with a lower level of conscientiousness (McCrae & Costa Jr, 1989). Individuals with high conscientiousness and low neuroticism have well-defined goals and are likelier to persevere in adversity. Setting specific objectives, overcoming adversity, putting pleasure in wait and not postponing all increase the likelihood of success and, as a result, self-efficacy beliefs (Vijeila, 2019).

The numerous benefits of strong self-efficacy make it a critical trait to acquire. Individuals are particularly harmed by fault-finding and self-criticism. Individuals need to desire to explore and experiment within their circumstances because this is required for individuals to comprehend their talents' limitations (Bonshor, 2017). Although excessive self-efficacy can result in excessive risk-taking, arrogance and dysfunctional perseverance, high self-efficacy is regularly obtaining undemanding assignments, receiving praise for lousy performance, being treated indifferently for poor performance, or accepting unsolicited assistance (Heslin & Klehe, 2006). When an individual fails, their self-efficacy is typically diminished. Because they form expectations about their behaviour and its effects based on views of others' behaviour and its consequences, vicarious experiences, observations of others' behaviour, and outcomes can likewise affect self-efficacy beliefs (Maddux & Volkmann, 2010).

Positive feedback increases self-efficacy, but negative feedback, which identifies improvement areas, decreases it (Daniels & Larson, 2001). The ultimate basis for efficacy expectations is an individual's physiological feelings in dangerous situations. Encouragement serves two purposes. It influences motivation and acts as a source of knowledge about one's current situation. Combining information and motivation results in skill development, which minimises emotional encouragement by giving the individual a sense of control (Bandura, 1977, 1986).

Cognitive, motivational, emotional, and selective processes are impacted by self-efficacy (Bandura, 1993). Self-control is highly dependent on self-efficacy. It affects one's thought processes, motivation, behaviour and emotions. When nervous, individuals may interpret physical discomfort as a manifestation of personal inadequacies. They may also ascribe anxiety to unsatisfactory work performance because of environmental circumstances. The impostor's emotional encouragement evaluations affect their interpretation. Stress levels have been connected to low self-efficacy (Barnes, 2004). Individuals who believe they are impostors are prone to blame bad performance on personal flaws. Self-efficacy has various effects depending on the mechanism through which it operates (Roskowski, 2010).

Self-efficacy has been demonstrated to affect cognition and attention (Bandura, 2013). With high self-efficacy, individuals set more specific objectives and stay with them for a more extended time (Bandura & Locke, 2003). According to a study, individuals who are unsure of their competence (as with impostors) focus on analysing their performance when confronted with extreme external demands (Bandura & Wood, 1989). As a result, they focus on flaws, whether genuine or imagined and are likely to fail at the given task. An individual's opinions on their skills affect their level of self-efficacy. Some say talents are acquired skills that improve with experience and performance. According to research, a distorted view of one's talents is associated with low self-efficacy. Others feel that talent is inherent. Individual failures are frequently the result of an erroneous belief in innate ability, as is interpreting others' triumphs as dangerous (Bandura, 1993).

When challenges develop, self-efficacy decreases, thinking becomes less strategic, and goals are simpler to achieve, according to research by Wood and Bandura (1989). The feedback that depicts a person's performance as ineffective or declining compared to others has also been connected with low self-efficacy, unproductive thinking, lax goal-setting and unpleasant outcomes. As a result, cognitive tactics that boost self-efficacy and, eventually, performance include social comparison and believing that skills come naturally (Bandura & Wood, 1989; Bandura & Jourden, 1991). Self-efficacy is critical when it comes to motivating processes. Individuals are motivated by their belief in their capacity to accomplish a goal. According to Bandura, individuals with high self-efficacy frequently blame themselves for failing or other uncontrolled events. Like impostors, they attribute their success to chance while attributing their failure to a lack of skill (Bandura, 1977; Clance & Imes, 1978; Cozzarelli & Major, 1990).

Self-efficacy affects motivation since it affects result expectations (Bandura, 1993). People's desire to participate increases when they believe in their abilities to carry out a particular activity and expect positive results. According to Bandura, motivation encourages more preparation and

commitment to tasks. The inspiration is reduced when poor self-efficacy is combined with expectations that action would result in accomplishment. Consequently, self-efficacy directly affects motivation regarding preparation and effort (Bandura & Cervone, 2000).

Like the IP, the fear of being caught out as a phoney functions as an incentive. Self-efficacy indirectly affects motivation since it affects goal-setting (Bandura & Locke, 2003). Bandura and Carvones' (2000) study suggests that self-dissatisfaction and self-efficacy increase motivation and, as a result, performance. Better performance is correlated with self-efficacy or dissatisfaction with oneself, although to a lesser level (Bandura & Cervone, 2000). Self-evaluation and self-efficacy goals that entail social comparison are what motivate individuals. Goals set expectations for behaviour. Feedback might assist in understanding the difference between expected and actual behaviour. In these situations, individuals maintain high self-efficacy and push themselves to get better results, even when these disparities may be manageable (Bandura & Cervone, 2000).

Negative impacts on mental health have been associated with the IP (Cokley *et al.*, 2013). Mental health conditions include perfectionism, low self-esteem, introversion, anxiety, and depression (Clance, 1985) (Cokley *et al.*, 2013; Schubert & Bowker, 2019). Both a direct and indirect link exists between depression and self-efficacy. Low self-efficacy negatively affects growth, positive social relationships and undesirable behaviour, which increases discontent. Depression is more closely linked to inadequacy than success (Bandura, Pastorelli, *et al.*, 1999). High levels of self-esteem may make individuals more susceptible to depression, according to Bandura. Depression was also linked to high social efficacy. High social effectiveness individuals produced social relationships and received social support, which helped them deal with difficult situations. Depression is caused by a lack of self-efficacy or confidence in one's capacity to regulate thoughts, which gives one a sense of control over recurrent negative ideas (Bandura, 1993).

3.4.3 Previous studies on decision-making self-efficacy and its implications for managers/leaders

Influential individuals are focused, persistent, goal-oriented, diligent and able to think clearly under pressure. According to research based on the self-efficacy hypothesis, an individual's level of personal efficacy affects their objectives, desires, the amount of effort they will put forth when working on a job and how long they will persist in facing setbacks (Maurer, 2001). Additionally, studies have connected a person's self-helping or self-hindering cognitive processes, how

effectively they react to challenging and dangerous situations and how resilient they are to self-efficacy.

Unsurprisingly, successful leaders have been presented similarly (Bass & Bass, 2009). Studies have revealed that good leaders have strong commitment, determination, resilience, goal focus, resourcefulness and problem-solving skills (Locke & Latham, 1990). Given what is known about highly effective individuals, these leadership studies show that a person with solid self-efficacy for the leadership role is what leading scholars have characterised for years. The relationship between a leader's self-confidence and effective leadership is one of the most researched phenomena in the literature.

According to all relevant studies, self-assurance is essential for effective leadership (Bass & Bass, 2009; Locke & Latham, 1990; Yukl, 2012). For example, charismatic leaders should ideally possess extremely high levels of self-assurance (House & Aditya, 1997). Additionally, it is fundamental to transformational leadership, which has received significant attention in contemporary leadership research (Bono & Judge, 2004). Self-efficacy and confidence, however, do not have the same theoretical underpinnings. Self-confidence is a generic sense of competence seen as a personal quality. Self-efficacy is assessing one's capacity to carry out a specific task. Since it involves social cognition, the appropriate circumstances could cause it to alter. Despite the conceptual distinctions, the two have some connection (Hollenbeck, 1991).

Decision-making is a managerial task. The most crucial duty of a leader is making decisions. However, despite having access to knowledge and making every effort, competent and responsible leaders may develop poor decision-making processes (Certo *et al.*, 2008; Loevallo & Kahneman, 2003). In the face of a flood of information and competing agendas and goals, leaders make decisions for their companies and the individuals they lead. Without a significant driving motive, the positive social influence on decision-making and the voluntary control preference of contemplation diminishes (Myburgh *et al.*, 2015; O'Connor & Arnold, 2001; Wood *et al.*, 2000). The demands placed on these individuals may thus be above their capacity for cognition, demanding the application of intentional cognitive effort (Ganster, 2005; O'Connor & Arnold, 2001; Payne, 1997).

The potential impact of self-efficacy beliefs on managerial decision-making has not received much attention despite their ubiquity (Hiller & Hambrick, 2005). According to prior research, self-efficacy affects performance on challenging decision-making tasks (Arenas *et al.*, 2006) and can influence individuals' performance on challenging decision-making tasks (Bandura, 2006). Since this area

of self-efficacy research has received little attention, self-efficacy ratings that reflect global or general ability typically do not accurately represent a person's success on specific tasks (Myburgh *et al.*, 2015).

Individual decisions do not guarantee that individuals will put forth the effort to follow the chosen path and experience hardship (Bandura, 2009). Leaders' opinions of their capacity to inspire others through their activities may be influenced by their self-efficacy beliefs. The concept of self-efficacy beliefs in business decisions may provide descriptive and predictive capacity, considering the likelihood of success, to execute certain decision-making activities at a set level of performance. It is based on how cognition and agentic action regulators interact (Myburgh *et al.*, 2015). To be accepted, look for collaboration, build skills, restrain distracting and unpleasant ideas, implement action plans and make correct evaluations, they have to work hard to improve their problem-solving and explaining abilities as well as their freedom in social influence (Myburgh *et al.*, 2015).

Management relies on a rigorous process of obtaining crucial information and considering choices to pick a course of action. Individuals thus select intellectually demanding activities to satisfy their higher judgement and decision-making requirements. The capacity to seek out, evaluate and integrate substantial knowledge, successfully use easily accessible resources and thoroughly consider efficacy beliefs all serve as effectiveness indicators (Wood *et al.*, 2000). These viewpoints on the value of inferential reasoning and exploratory search are connected to an organisation's goals being furthered through a more thorough, logical, and complete decision-making process (Myburgh *et al.*, 2015)

Managers must plan actions that address the demands of stakeholders. Management uses an organised method to acquire crucial information and assess potential courses of action. Individuals thus select intellectually demanding activities to satisfy their higher judgement and decision-making requirements. Effectiveness beliefs relate to the capability to successfully use existing resources, whereas deliberative processing efficiency is the capacity to research, evaluate, and integrate essential information (Wood *et al.*, 2000). These opinions in an exploratory approach and inferential efficacy are linked with a more rational, methodical, and inclusive decision-making process for the organisation's benefit (Myburgh *et al.*, 2015).

Several objectives and subjective and logical laws impact how decisions are made. The decision is based on prior behaviour and predicted future results. As a result, deciding is viewed as a multi-staged rational and intentional process. Although sensible regulation is described as a logical and

deliberate choice among choices, circumstances impact decision-making (Omarli, 2017). The leader's personality has the most significant influence on decision-making. Family background, education, and knowledge comprise the leader's decision-making component (Musteen *et al.*, 2011).

Individuals' cognitive, moral, and psychological qualities influence their decision-making process (Jones, 1991). A choice consists of conscious mental processes with significant logical components, suggesting that decisions should be rational. However, emotional and subconscious factors are not usually mentioned and might make a decision appear illogical to a third party (Omarli, 2017). Perception, motivation, comprehension, interpersonal relations and interactions are all psychological aspects that influence decision-making. Mental components of the decision-making process are more affected by perceptions, such as conceptualisation and appraisal. The excitement that plays a part in evaluating possibilities is called emotion, which governs decisions and how they turn out (Franken & Muris, 2005). The decision-making process is influenced by intelligence, cognitive style, age, experience and the level of competency of the leader. For example, witty, easy-to-understand, knowledgeable and intelligent leaders may make better and more qualitative decisions than others.

There is a link between a leader's psychological qualities and capacity to make decisions (Hess & Bacigalupo, 2011). Personal and psychological traits affect a leader's decision-making capacity during the decision-making process. Their past experiences, attitudes and opinions influence leaders' decisions. The decision-making process, the problem type, the environment, and the decision-making style all impact management decision-making. Additionally, when shortcuts are misused, biases in decision-making are linked. Biases and mistakes in judgement may therefore affect the process.

Every aspect affects how the leader makes decisions. The decision-making process, the problem type, the environment, and the decision-making maker's style all impact management decision-making. Additionally, when shortcuts are misused, biases in decision-making are linked. Biases and mistakes in judgement may therefore affect the process. Every element affects the leader's decisions (Jones & Roelofsma, 2000). The choice is made based on past behaviour and anticipated future outcomes. As a result, decision-making is perceived as a multi-staged rational and deliberate process. While reasonable regulation is defined as a conscious and logical choice among alternatives, decision-making is influenced by various factors. With sensible laws, this process is controlled by multiple objective and subjective variables (Omarli, 2017). Figure 3.4 depicts the five main facets of intuition in leaders' decision-making processes.

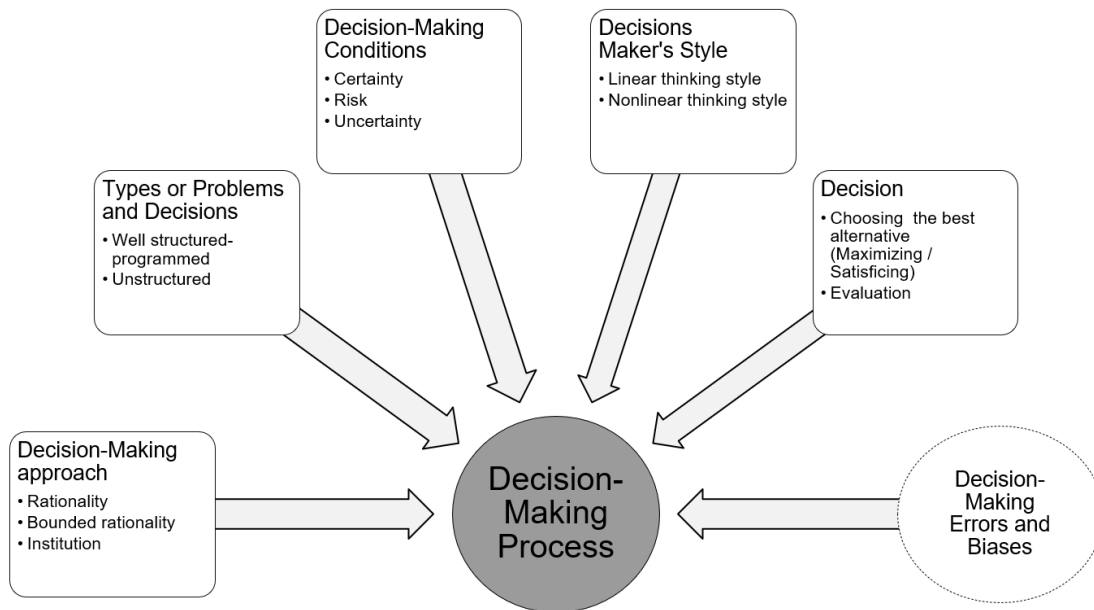


Figure 3.4: Overview of Leadership Decision-Making

(Source: Robbins & Coulter, 2007)

Figure 3.5 illustrates that the leader's personality greatly influences decision-making. Family background, education, and knowledge comprise the leader's decision-making component (Musteen *et al.*, 2011). Even when all these sub-structures are almost identical, the leaders are different. The decision-personality maker makes a difference (Omarli, 2017).

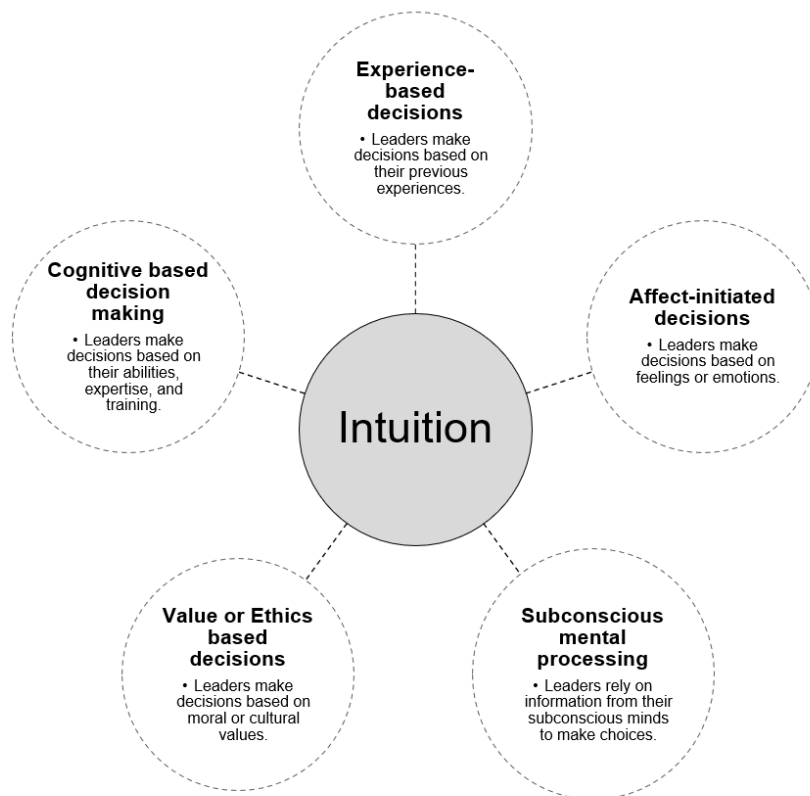


Figure 3.5: Intuitive Decision-Making

Source: (Burke & Miller, 1999)

The image depicts the five distinct components of intuition that influence leaders' decision-making processes. Leaders who make decisions based on strong emotions and sentiments perform well, even more so when they know their feelings (Omarli, 2017). Individuals' cognitive, moral and psychological qualities have influenced their decision-making. A choice consists of conscious mental processes with significant logical components, perception, motivation, understanding, interpersonal relationships and decision-making interactions. Perceptions such as conceptualisation and assessment strongly influence the decision-making process's mental components (Omarli, 2017).

Motivation governs how decisions are made and, therefore, also the outcome thereof (Kiener, 2006). Motivation is critical to all organisational transformations and significantly impacts the result. Age, experience, the leader's degree of competency, and cognitive style impact decision-making. For example, funny, easy-to-understand, clever, and wise leaders may judge more accurately and timely (Kiener, 2006).

Confidence is connected with situation-specific self-efficacy. Numerous research has connected confidence with situation-specific self-efficacy (Williams, 1997). According to integrative leadership theory, a person's sense of self-assurance affects their confidence to exercise the leadership behaviours necessary in a given circumstance (leadership self-efficacy) (Chemers *et al.*, 2000). This implies that a very confident leader would also probably express high self-efficacy for the leadership position. However, the self-efficacy hypothesis contends that self-assurance does not always directly impact a leader's achievement. The critical causative component is the person's perception of their capacity to perform the leadership job successfully. Despite the lack of information, studies in the literature on self-efficacy show that beliefs about a leader's success are influenced by self-efficacy. Bandura and his team have researched managerial decision-making, demonstrating the significance of self-efficacy belief in the management process (Bass & Bass, 2009).

Management is about making decisions and being part of the organisation's activities and outcomes (Dean Jr & Sharfman, 1996). Because the effectiveness of business operations is primarily influenced by how decisions are formed and implemented, the study of decision-making within an organisational context is becoming increasingly significant. The decision-maker is a constant and ever-present component when we study the nature of decision-making. Leaders who often fill this role of decision-maker are constantly faced with assessing choices and making decisions about various challenges. As a result, they are critical in the decision-making process (Omarli, 2017).

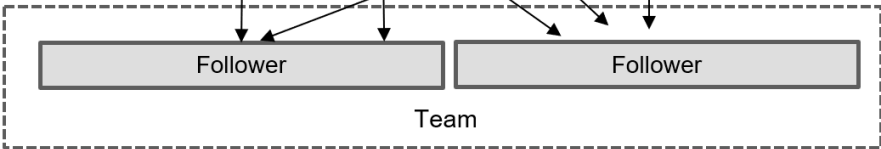
Making decisions is a crucial management function that is entirely dependent on individuals. This process should target all activities to ensure that the appropriate decisions are taken, or if one has already been made, it is implemented and monitored. As a result, leaders must constantly evaluate options and make broad decisions (Rus *et al.*, 2019). As leadership decisions play a part in achieving the organisation's business goals and achievements, decision-making is increasingly important (Igbaekemen, 2014). When the nature of the decision-making process is examined, the choice factor is a constant and ever-present element. Even if information collecting and evaluation methods are appropriately set up, an unidentified issue or an information demand renders them useless (Rus *et al.*, 2019). The influence of the IP on the choice factor within the decision-making process is vital, as this will determine how a leader decides.

Management is ultimately responsible for making the decision, carrying it out and evaluating the outcomes. Decision-making occurs in an environment of freedom and choice; therefore, a leader's area of decision-making should be defined by their dimensions of responsibility. Decision-making

by leaders is a multidisciplinary challenge (Stojanovic & Kessler, 2011). The dispute over how decision-making influences management personality qualities or how decisions are implemented is a broader debate between teaching's dispositional and situational methodological ideas.

Many methods define the decision-making process steps and share the fundamental recognised processes of identification, design, solution selection and monitoring of outcomes. Identifying the goal, obtaining information, anticipating solutions, making decisions, putting those decisions into action, and reviewing the results are outlined in this decision-making context (Frankovsky *et al.*, 2017).

Decision-making is a strategic process. Researchers have shown that when managers use the strategy, they are more productive, and their staff is more content and productive (Ronald, 2014). The situational theory states that the best leadership approach depends on the context. This method suggests selecting a management style that promotes group decision-making (Vroom & Yetton, 1973). The Vroom-Yetton model was created to aid a leader in selecting the most effective decision-making process and leadership style for a given circumstance (Vroom & Yetton, 1973). Because no decision-making approach is appropriate for every occasion, Vroom-Yetton offers a choice of alternatives and guidance tailored to the leader's demands. This model defines five possible styles depending on the context and engagement. They are as follows and can be illustrated in Figure 3.6, Vroom-Yetton model on Leadership decision-making below:



Source: (Vroom & Yetton, 1973)

Consultative Type 1 (CI): Before deciding, the leader individually discusses the issue with the appropriate followers and requests their opinions. The leader's choice may or may not impact the followers, even if there is no interaction between them in this scenario. Therefore, the followers' involvement is limited to making original decisions. *Consultative Type 2 (CII):* The leader discusses the issue with the appropriate followers, gets their feedback and makes their own decision. Here, followers interact and converse while learning about various possibilities. However, the impact of the followers may or may not be reflected in the leader's choice. Therefore, followers' involvement is at the level of facilitating decision-making.

Group-based Type 2 (GII): Through brainstorming, the leader talks to the followers about the problem and issue and solicits their ideas and solutions. Leaders are open to all options and do not try to force their views. The choice made by the group is the final one.

Vroom and Yetton developed the following seven questions to assist leaders in gauging the degree of followers' decision-making participation. They include decision quality, dedication, problem knowledge, and acceptance (Vroom & Yetton, 1973). In the present situation, one must answer 'Yes' or 'No' to the following questions: Is there a necessity for quality? Is the solution's nature critical? Is there any technical or rational basis for choosing amongst alternative solutions? Do I have enough knowledge to make an informed decision? Is the issue well-structured? Is it possible to identify different courses of action and techniques for evaluating them? Is it necessary for subordinates to approve the decision before it can be implemented? Is it reasonable to assume that my subordinates would accept it independently? Are subordinates aware of the organisational objectives that must be met to solve this problem? Is there likely a dispute among subordinates in attaining the chosen solution? The styles may be deduced from the graph based on the answers.

Two dimensions lie at the heart of this paradigm (Fotr & Švecová, 2006). Leaders who rely exclusively on their own or their co-workers' information are at the extremes of the first dimension. Leaders make decisions on their own or alongside their team members to determine the extreme points of the second dimension (Frankovsky *et al.*, 2017). Leaders who suffer from the IP perceive these dimensions more complexly than leaders who do not. They rely not only on the information they receive from their co-workers, the information they perceive and collect from their environment, but also on their internal voice of self-doubt. This could significantly influence the context and amount of engagement the leader may have, as proposed in this model.

Decision-making affects work adaptability. One of the most crucial managerial tasks is decision-making. While making decisions impulsively is erroneous, it does reflect prior behaviour and future outcomes. It is critical to consider decision-making as a multi-stage procedure. The final person to decide the decision-making process is the leader. Leaders must consider the business goal because it impacts their operations and outcomes (Omarli, 2017).

Work adaptability is the ability to be prepared for the tasks necessary to prepare for and perform a job and any additional tasks that may develop due to workplace changes (Savickas, 1997). Career adaptability is sometimes described as a psychological concept used to get past and present developmental challenges like the change from school to the workplace and the

associated emotional trauma. It measures how prepared individuals are for activities related to career advancement (Savickas, 2013). The capacity to plan a chosen profession, examine oneself and the surroundings, gain knowledge about the selected job area, and decide what career to define someone with solid career adaptability (Savickas & Porfeli, 2012). A difficulty with one aspect of career flexibility might interfere with career growth or selection (Firosyana & Kurniawati, 2019; Savickas, 2013).

Data indicate that teenage career adaptability development is challenging. Most teenagers finally feel unsure about the major they must choose when choosing their higher education degree since they cannot acquire the capacity to investigate themselves and their surroundings and obtain knowledge about this professional sector. Teenagers will consequently encounter scenarios with job indecision that might later damage their capacity to select a career path or vocation that is inconsistent with their character (Fouad *et al.*, 2009). By boosting their self-efficacy in activities related to making career decisions, teens can be helped to overcome this issue (Fouad *et al.*, 2009). Self-efficacy in career decision-making influences professional flexibility (Hou *et al.*, 2014). Proactive individuals, thus those who actively look for information and deliberate before acting, will have high self-efficacy in accomplishing career development activities (Firosyana & Kurniawati, 2019; Hou *et al.*, 2014). Individuals with high self-efficacy may evaluate their worth and choose a professional path, enabling them to foresee any potential issues (Hirschi & Valero, 2015).

Self-efficacy in activities related to making career decisions is particularly vital for young leaders as it lays the groundwork for their lifelong leadership trajectories. Developing a strong sense of self-efficacy in career decision-making empowers young leaders to make informed choices aligned with their aspirations and strengths, fostering a solid foundation for their professional journey. By honing their ability to navigate and embrace opportunities, challenges, and uncertainties early on, young leaders can cultivate resilience, adaptability, and a proactive approach to decision-making. This self-assuredness not only accelerates their leadership development but also influences their capacity to inspire, guide, and lead effectively, thereby propelling their overall leadership impact throughout their careers.

The IP of leaders than a low-level worker will more significantly impact the IP's impact on effective leadership behaviours in the organisation. The IP can harm higher-order leadership behaviours in addition to daily chores. For instance, it was discovered that poor self-perceptions influenced task delegation to subordinates by supervisors with high IP scores (Bechtoldt, 2015)

The effective adoption of sustainable business practices is built on the pillars of strategic planning and the leadership decision-making process. Literature has examined sustainability in organisations from a variety of angles. A recent study has focused heavily on favourable organisational decisions for the environment, economy, and society (Epstein, 2018; Ture & Ganesh, 2018).

However, sustainable leadership has not yet become a stand-alone leadership ideology. McCann and Holt (2011) state that “sustainable leadership is concerned with enhancing everyone’s lives while generating present and future revenues for an organisation” As a result, certain pro-sustainability attitudes and practices are expected of excellent leaders. Leader behaviours are distinct from leader qualities like charisma since the former can be developed, while the latter is challenging to develop (McCann & Holt, 2011).

Organisational leaders are expected to have a long-term vision because sustainability is necessary for all spheres of existence. They should deliberately take on unique, complex decisions and roles outside regular job positions to uphold sustainable company standards. However, dishonest managers might avoid adopting IWBs and other role behaviours. In addition, they could struggle to make riskier and more complicated decisions than routine ones. These potential effects on long-term leadership practices have not yet been researched. We try to connect three key Impostor Phenomenon traits with these sustainable leadership skills since there are no primary connections in the literature – decision-making by managers and low self-efficacy.

Complex decision-making procedures, uncertainty, politics and competing interests all play a role in organisational decision-making. The daily activities of leaders have been ignored as leadership studies concentrate on leadership theories and styles (Bechtoldt, 2015). According to the Cynefin paradigm, leaders make vital organisational decisions that range from simple to chaotic (Snowden & Boone, 2007). Self-efficacy beliefs are “individuals’ assessments of their capacity to achieve a particular degree of performance” (Bandura, 1986).

Self-efficacy is a crucial characteristic of leaders. It plays a crucial part in self-regulation because one’s impression of their efficacy impacts how much and how long one will work on a task. Managerial Decision-Making Self-Efficacy (MDSME) is the belief that managers have in their ability to make decisions (Myburgh *et al.*, 2015). There is much demand for leaders to demonstrate their managerial abilities (Fast *et al.*, 2014). According to prior research, lower self-efficacy is one of the critical traits of impostors. A person with solid self-efficacy will demonstrate

self-assurance and perform tasks with the necessary effort and effectiveness. The influence of the Impostor Phenomenon can further be deduced that managers with low self-efficacy are more likely to doubt their preferences or choices, which reduces their ability to make wise decisions.

3.4.4 Decision-making Measuring Instrument

The MDMSEQ was used to evaluate a leader's self-efficacy in making managerial choices. This survey measured the decision-making self-efficacy of managers. Subjective self-efficacy beliefs are compared to levels of decision-making capacity on a 100-point scale when completing the MDMSEQ (Myburgh, 2010). The MDMSE Questionnaire was used in this study to assess a leader's self-efficacy in managing decisions. This study evaluated managers' confidence in their ability to make decisions. When completing the MDMSEQ, subjective self-efficacy beliefs are compared to levels of decision-making capability on a 100-point scale. The first activity had nine parts; the design phase entailed methodical data collection and debate, with twelve (Myburgh *et al.*, 2015). The following section will present the literature review of IWB as a research construct.

3.5 INNOVATIVE WORK BEHAVIOUR

“Creativity is thinking up new things,
Innovation is doing new things.”
Theodore Levitt

The ability to produce original, worthwhile ideas is the definition of creativity. Creativity manifests at a personal level for the individual. In contrast, innovation can put such ideas into practice in a business. Innovation manifests on a corporate level for the individual. Individual characteristics of the organisation's founders and personnel and elements of teams and the organisation provide inputs to organisational innovation (Urbancova, 2013). To transform these inputs into innovative behaviours, organisations need to promote and encourage a corporate culture and environment that supports innovation (Kapucu & Ustun, 2018).

Creativity and innovation push organisations ahead and assist them in maintaining a competitive edge (Anderson *et al.*, 2004; Zhou & Shalley, 2003). Leadership also affects the creativity and innovation of teams, individuals and organisations. As a result, business and academics have prioritised creativity and innovation, and research in this area has expanded and produced new insights (Anderson *et al.*, 2014). Although leadership has been the subject of previous research on creativity and innovation, it is often done randomly or as a study topic (Anderson *et al.*, 2004; Rank *et al.*, 2004; Zhou & Shalley, 2003). Prior studies on these topics frequently summarised

current discoveries, gave overviews of critical theoretical frameworks, listed relevant literature, and emphasised practical applications (Shalley, 1991).

Leadership influences the creativity and innovation of individuals, teams and organisations. The mindset of a leader is inextricably linked to innovation. Leaders acknowledge and value contributions and encourage followers to seek out new information. When innovators see a need for improvement, they employ logic, reason and imagination to generate solutions. The IP influence may impair the leader's sense, motivation and creativity, impairing their capacity to originate, introduce, motivate and implement innovative ideas.

3.5.1 Previous studies on Innovative Work Behaviour and its implications for employees and organisations

Innovative Work Behaviour comprises the deliberate design, introduction and implementation of novel concepts in specific settings to boost the effectiveness of a job function, group or organisation (Ramamoorthy *et al.*, 2005). This is innovative work when a person purposefully offers and implements novel ideas to a particular professional job, group or organisation (Oxford English Dictionary, 1989). Innovation dividends include improved organisational performance and social-psychological advantages for individuals or groups, such as a better match between job needs and resources as seen by employees, raised workplace satisfaction, and enhanced interpersonal communication (Reuvers *et al.*, 2008).

IWB may encompass idea development, promotion and application (Ramamoorthy *et al.*, 2005). Innovations are new ideas intentionally developed, presented and put into practice inside a work position, a group or an organisation to improve the performance of such roles, groups or organisations. They range from innovative behaviour to deliberate endeavours that produce particular and advantageous consequences. Innovation dividends include higher workplace satisfaction and social-psychological advantages for individuals or groups, including better matching perceived job needs and a worker's resources, increased workplace performance and improved interpersonal interactions (Janssen, 2000).

IWB influences an individual's behaviour in the work environment. By working more productively, employees who engage in these behaviours will likely benefit the company, the group or even themselves. Depending on how they feel their psychological contracts have been fulfilled, individuals may not feel obliged to engage in specific behaviours. Employees who decline to participate in IWBs may do so without violating the organisation's stated contract or incurring adverse consequences. IWBs are likelier because of employees' innate motives and

psychological contract fulfilment presumptions (Ramamoorthy *et al.*, 2005). Later, IWB was defined as a person's purpose to offer novel and beneficial concepts, methods, products or practices.

IWB is also characterised as a complicated behaviour encompassing three activities: idea development, promotion and execution. Individual innovation begins with producing fresh and valuable concepts in any industry. Workplace problems, inconsistencies, discontinuities and emerging trends are familiar drivers for new idea generation (Janssen, 2000). IWB comprises three non-sequential and separately executed behavioural actions (Janssen, 2000). IWB refers to extra-role behaviour that is not expressly recognised by the incentive system (Reuvers *et al.*, 2008).

Individuals can anticipate engaging in any mix of these behaviours since innovation processes are typically characterised by discontinuous activity. When an employee chooses to go beyond the parameters of their employment but is not officially or implicitly rewarded for it in the official incentive structure, they engage in extra-role behaviour (Janssen, 2000). Scientists and practitioners stress the significance of individual employees' IWB for organisational performance. The capacity to continuously reinvent products, services and work processes is essential for today's organisations. As a result, interest in innovation as a subject for academic research has increased in recent years. Innovation studies address organisational, workgroup, network and individual levels of innovation management (De Jong & Den Hartog, 2010).

Innovative work behaviour and creativity are similar but not the same. The distinction between creativity and innovation is not clearly defined. While early research mainly concentrated on forming creative ideas, a recent study has called for a broader scope and more scientific attention to implementing such statements (Javed *et al.*, 2021). As a result, IWB is now widely seen as including various actions related to generating ideas, establishing support for them, and their implementation (De Jong & Den Hartog, 2010). Even though IWB is a multi-level phenomenon, most IWB measurements are one-dimensional in principle (Reuvers *et al.*, 2008). Any actual data do not support the precision of IWB measurements. Most studies depend solely on single-source data, such as employee ratings of IWB and its correlates (De Jong & Den Hartog, 2010).

Due to their complexity and active environment, identifying creativity and innovation has proven difficult (Batey, 2012; Mumford & McIntosh, 2017). Creativity and innovation refer to developing and implementing new and improved task methods in the corporate context. These broad concepts cover several distinct yet interconnected processes that produce many outcomes

(Anderson *et al.*, 2004; Anderson *et al.*, 2014). Idea generation is the initial stage, followed by innovation, transforming ideas into better operations, practices or products. As a result, creativity and innovation nearly always produce concrete benefits (Hughes *et al.*, 2018).

Some think “innovation” refers to all forms of creativity (West *et al.*, 1990). Creativity and innovation begin with an idea, but they are different. The process of innovation is not the only way that creativity grows. Although innovation, also known as the execution of innovative ideas, is necessary for new approaches, not all innovative ideas are implemented (Hughes *et al.*, 2018). According to past studies, creativity and innovation are two discrete concepts that result from independent processes and have different effects. As a result, we can theoretically distinguish the two, and we should determine them empirically. Researchers often interchange these concepts with authors using innovative research to reinforce innovation and vice versa (Kao *et al.*, 2015; Wang & Zhu, 2011). Researchers have not been able to distinguish between innovation and creativity. Self-efficacy, for instance, affects the development of ideas, whereas leadership support predicts innovative endeavours (Anderson *et al.*, 2014; Neubert *et al.*, 2008). Table 3.2 illustrates the differences between creativity and innovation.

Table 3.2: Contrasts between Creativity and Innovation

FEATURE	CREATIVITY	INNOVATION
Idea generation	Yes	No
Idea promotion	No	Yes
Idea implementation	No	Yes
Novelty	The development of anything “new” is referred to as absolute novelty. The result of anything “new” is referred to as absolute novelty.	Adopting and adapting other individuals’ ideas is unnecessary and may be somewhat original.
Utilitarian focus	It is not always possible to develop innovative concepts to enhance organisational outcomes.	To enhance organisational outcomes, it is necessary to take creative activities.
Area of development	Creativity is primarily based on intrapersonal and cognitive processes. Social interactions can aid in refining and improving creative ideas; nevertheless, innovative ideas are mental.	These are primarily the interpersonal, social and functional processes that go into creativity.

FEATURE	CREATIVITY	INNOVATION
Results	An ideal is the result of a successful creative process.	A functional and implemented concept is the result of a successful innovation process.

Source: (Anderson *et al.*, 2014)

Creativity is a process characterised by consistency, adaptability and unique thought. Creativity is the capacity to create or produce anything new (Sonnak & Towell, 2001). Decision-making is directly influenced by creativity; it has been proven that creativity significantly affects decision-making (Mayasari & Kemal, 2020). A leader's creativity influences decision-making (Mayasari & Kemal, 2020). Independence, responsibility, hard effort, drive, optimism, curiosity, confidence, open-mindedness and tolerance are just a few traits that may be developed to achieve outstanding creativity (Mayasari & Kemal, 2020).

Leadership drive IWB in the workplace environment. Organisations rely on their individuals to innovate methods, tactics and operations to accomplish this goal effectively. If organisations are to gain, individuals must adopt IWB (Ramamoorthy *et al.*, 2005). Several conceptual frameworks have examined the elements that influence employee participation in IWBs. According to job design studies, workers with greater freedom and flexibility are likelier to exhibit creative and innovative behaviour (Ramamoorthy *et al.*, 2005). According to studies on organisational justice, distributive and procedural justice elements may influence IWBs. The performance of shared contractual obligations may impact an employee's actions at work. IWB participation allows employees to fulfil their psychological contracts (Ramamoorthy *et al.*, 2005).

Employee creativity and innovation are influenced by leadership, which is viewed as a key contextual element (Anderson *et al.*, 2014; Shalley & Gilson, 2004). Leadership, which promotes creativity, has a vital influence on creative problem-solving processes and is also related to implementing innovative ideas (Amabile & Khair, 2008; Michaelis *et al.*, 2009). The value of the work is ingrained in the innovative culture, which encourages original thought and problem-solving techniques. It may inspire group members to go above and beyond what is required (Villaluz & Hechanova, 2019).

Employee, team, and organisational creativity and innovation have been linked to leadership (Hughes *et al.*, 2018). The variables that contribute to the formation of a creative culture within the organisation have been studied by various authors (Damanpour, 1991; Villaluz & Hechanova, 2019). Minimal effort has been made to identify and analyse the cumulative effects of specific

leadership behaviours. Much leadership and innovation research, notably in the literature on innovation and creativity, focuses on generic leadership styles (Hughes *et al.*, 2018). Most assessments of leaders within the creativity context have concentrated on 'leader styles,' with personality and IQ traits receiving less attention (Huang *et al.*, 2016; Hughes *et al.*, 2018). Leadership behaviours and creativity are closely related (Damanpour, 1991). Leaders who acknowledge and reward contributions produce high levels of creativity and inspire their followers to look for new information sources inside and beyond their units and organisations (Villaluz & Hechanova, 2019).

Research reveals that these two behaviours are based on different cognitive abilities. Similarly, in entrepreneurial literature, opportunity exploration is viewed as preceding concept creation. Personality and contextual variables impact both behaviours (De Jong & Den Hartog, 2010). The IWB theory may be broken down into several aspects, often connected to critical stages of the innovation process (Bos-Nehles *et al.*, 2017). Idea creation, coalition building and execution are the three stages of IWB. Idea generation is a broad concept that includes researching and developing ideas (De Jong & Den Hartog, 2010). Promoting a concept is essential after it has been finished. They must be motivated because most viewpoints diverge from those currently held by their workgroup or organisation. Even if a concept is good and seems to close a performance gap, it is not always clear if its benefits outweigh the expense of creating and executing it, and resistance to change is expected.

The literature on creativity in organisations focuses on individuals who play informal roles and help innovative ideas break organisational boundaries. Finding support and building coalitions requires trust in innovation, success, persistence, and enlisting the right person's help (De Jong & Den Hartog, 2010). Ideas must be put into practice. Ideas become a reality through work and a goal-oriented mentality. Idea implementation includes creating new goods or work procedures, evaluating them and adjusting them. Another illustration is the integration of innovations into customary work procedures and behaviours (De Jong & Den Hartog, 2010).

IWB is a process. A detailed literature analysis demonstrates numerous methods for assessing IWB based on different IWB properties. It is noteworthy that De Jong and Den Hartog (2010) asserted that scientists and practitioners emphasise the significance of an employee's IWB for the operation of an organisation. These researchers created an IWB metric with four dimensions: idea production, advocating, exploration, and application (De Jong & Den Hartog, 2010). According to research by other academics, the four tasks that makeup innovation development are opportunity investigation, idea production, concept promotion and idea realisation (Amabile,

1988; Ayoub *et al.*, 2021; De Jong, 2006; Janssen, 2005; Kanter, 1988; Kleysen & Street, 2001; Messmann & Mulder, 2012; Scott & Bruce, 1994; West, 1990).

The three critical elements of IWB identified are idea generating, idea promotion, and opportunity research (Messmann & Mulder, 2012). The literature also agrees that IWB metrics should include the stages of concept generation, introduction and execution (Spiegelaere *et al.*, 2012). One study conceptualises and examines faculty members' ideas utilising questionnaires to address various concerns, such as sustainability (Loh, Friedman & Burdick *et al.*, 2013). Additionally, studies have linked project replication, project dissemination and constant focus on the objective issue as essential for achieving longer-term changes (Loh *et al.*, 2013).

Several factors are used in the literature to measure IWB (Spiegelaere *et al.*, 2012). Idea execution and idea generation are two topics covered (De Jong & Den Hartog, 2007; Yuan & Woodman, 2010). Three elements of idea generation, concept advocacy and idea execution have been advocated by several authors (Carmeli *et al.*, 2006; Janssen, 2000; Messmann & Mulder, 2011; Reuvers *et al.*, 2008; Scott & Bruce, 1994). Further studies by scholars cover the dimensions, namely opportunity exploration, idea promotion, idea realisation and idea sustainability (De Jong & Den Hartog, 2010; Kleysen & Street, 2001; Spiegelaere *et al.*, 2012).

The act of being innovative requires the production of something unique or unusual. Since innovative behaviours often include developing novel products, services, concepts, methods or practices, they are change-oriented (Spiegelaere *et al.*, 2012; Spreitzer, 1995). Any endeavour to assist in creating and applying innovative ideas that will benefit an organisation falls under innovation and change activities (Tuominen & Toivonen, 2011).

Innovative work behaviour can be seen as a psychological contract forming part of a shared obligation system within the workplace. Mutual understanding can foster an explicit or implicit feeling of shared responsibility. Employee loyalty, productivity, organisational commitment, and desire to stay with the company can all be influenced by their perceptions of how contracts are fulfilled. Employees may believe that the fulfilment of the contract has met or fallen short of their contractual duties (Ramamoorthy *et al.*, 2005).

Though perceived employee obligations and met-expectations seem the same, they could refer to two parts of the psychological contract. Met-expectations refer to an employee's evaluation and the belief that their work experiences have lived up to their expectations (Ramamoorthy *et al.*, 2005). Without express or implied promises from the employer, such expectations may be

established independently. As long as the critical workplace characteristics employees have learned to anticipate are satisfied, mutuality is neither necessary nor demanded (Rousseau, 2004).

Workers believe in the organisation's promises of justice, needs, training and development opportunities, discretion, autonomy, pay and a good working environment. However, employers have a slightly different perspective on reciprocal obligation than workers. Employees who feel their employer has met its obligations are more likely to feel compelled to take voluntary actions that might benefit the business (Ramamoorthy *et al.*, 2005). However, because their employers neither demand nor overtly reward such behaviour, workers are less likely to respond in a discretionary manner if they feel a contract breach has occurred. According to studies, the psychological contract's met-expectations element affected the sense of duty to support the organisation (Turnley & Feldman, 2000).

The expectations component of the psychological contract will favour how strongly individuals believe they have to innovate (Ramamoorthy *et al.*, 2005). Therefore, meeting expectations and commitment to innovation will positively impact IWB. It has been shown that solid leadership may act as a catalyst for internal innovation. As a result, several studies have found a connection between work unit effectiveness measurements and transformative leadership (Reuvers *et al.*, 2008).

3.5.2 Innovative Work Behaviour and its implications for Managers/Leaders

The notion of leadership has been researched in several ways. Several academics have attempted to simplify and combine these strategies based on Bass's theory, defining transformational and transactional leadership (Bass *et al.*, 2003; Seltzer & Bass, 1990). Transactional leadership must be understood to fully understand how transformational leaders influence their followers (Reuvers *et al.*, 2008). The behaviours and attitudes that affect how well a leader interacts with their followers, as shown by an exchange process, are the focus of transactional leadership (Bass *et al.*, 2003).

Leadership styles influence IWB in various manners. Although Bass emphasises that transactional and transformational leadership styles are separate but not necessarily incompatible methods to achieve effective leadership, Burns sees the two concepts as opposing. According to Bass, transactional leadership is characterised by three distinct behaviours: contingent reward, which produces rewards for achieving goals; active management by exception, which produces

monitoring and behaviour correction; and passive management by exception, which produces involvement when standards are not met (Bass *et al.*, 2003; Reuvers *et al.*, 2008).

A leader's effect on followers distinguishes transactional leadership from transformational leadership (Kuhnert & Lewis, 1987). Followers display admiration, fidelity, trust and respect for their leader. Transformational leaders may influence followers by addressing and altering their values and self-esteem and connecting their self-concept to the organisation's or group's goals. Supporters act more assertively and are more likely to support the group's objectives (Seltzer & Bass, 1990). Moreover, whereas transformational leaders inspire their followers to put the greater good ahead of self-interest, followers are motivated by a fear of disappointing the leader (Reuvers *et al.*, 2008).

Bass developed a seven-dimensional model to understand transactional and transformational leadership (Bass *et al.*, 2003). The seven-factor model has been transformed into assessing transactional and transformative leadership. Idealistic influence, intellectual stimulation, individualised concern, and inspirational drive are the four pillars of transformative leadership (Bass *et al.*, 2003). An idealised influence is the capacity of a leader to serve as a role model, winning admiration, respect and trust. The capacity for taking calculated risks and consistency in decisions and actions serve as the cornerstones of trust (Bass *et al.*, 2003; Reuvers *et al.*, 2008).

When a leader can inspire individuals to become aware of issues and understand their views and values via creativity and innovation, intellectual stimulation flourishes in a supportive environment (Bass *et al.*, 2003). Additionally, followers are urged to refute conclusions and take on challenging jobs by rephrasing problems (Reuvers *et al.*, 2008). Individualised care is a leadership quality to which the leader pays close attention and considers the distinctions among his followers. The leader engages in ongoing coaching and feedback that links the followers' needs to the organisation's objectives, promoting self-actualisation and personal growth (Reuvers *et al.*, 2008).

Inspirational motivation is the inspirational motivation for a transformative leader's capacity to develop an exciting, appealing and convincing future vision. By using symbols and projecting confidence and authority, leaders may inspire their followers to believe in their abilities to achieve (Bass *et al.*, 2003; Reuvers *et al.*, 2008). Only a few empirical studies have unambiguously demonstrated a link between innovative work practices and transformative leadership (Janssen, 2000). However, many studies have been done to determine how IWB could be improved by transformational leaders (Bass *et al.*, 2003). There are various reasons to believe that transformational leadership positively influences creative individuals' actions. Transformative

leadership encourages followers to go beyond the conventional exchange of performance agreements, distinguishing it from transactional leadership (Reuvers *et al.*, 2008).

The leader motivates followers by urging them to go above and beyond what is necessary. A transformative leader can inspire individuals to re-evaluate possible issues and the workplace, leading to fresh approaches (Reuvers *et al.*, 2008). By using motivating inspiration, a transformative leader may help followers believe in their capacity for success. When workers are aware of their abilities and confident in their capacity to use them, they are more likely to engage in innovative job activities. A transformational leader emphasises the diversity of followers' features so that personalised attention may encourage IWB. According to an empirical study, there is a reasonable correlation between indicators for work unit effectiveness and transformative leadership. Many of these studies emphasised the inverse association between transformative leadership and IWB, emphasising IWB as a component of efficiency (Reuvers *et al.*, 2008)

Leadership in the workplace has long been recognised as a critical driver of organisational development. Given the significance of employees' IWB, experts looked at what made IWB possible. Leadership was crucial in encouraging employees' IWB (Javed, Abdullah, *et al.*, 2019). Employees who participate in IWB challenge the status quo by speaking out for novel ideas, opposing conventional wisdom and debating with superiors. In such an environment, many innovative ideas would fall flat. Research also revealed that employees' calls for new changes were often disregarded since they were viewed as abnormal workplace behaviour. Management saw innovators as potential disruptors (Javed, Abdullah, *et al.*, 2019).

Employees need psychological empowerment for the complex method and to engage in IWB. Employees are given autonomy, meaning, competencies, and feedback via psychological empowerment (Kraimer *et al.*, 1999). According to cognitive evaluation theory research, intrinsic motivation enables individuals to feel autonomy, competency, purpose, and feedback in their work (Ryan & Deci, 2000). To assist their IWB, employees in the innovation environment assessed their surroundings. Employees were likelier to demonstrate IWB if they felt the environment was encouraging (Javed, Abdullah, *et al.*, 2019).

Research has also suggested that psychological empowerment may improve the IWB. Consequently, psychological empowerment – which received less attention in the study – impacted the relationship between inclusive leadership and IWB (Javed *et al.*, 2021). A leader that values diversity will be open, accessible and available. In other words, inclusive leaders are

extraordinary situational factors that might give workers a psychological boost (Javed, Abdullah, *et al.*, 2019).

Inclusive leadership and IWB leaders who practise inclusive leadership express support and gratitude for the contributions of others via their words and deeds (Javed *et al.*, 2021). To be inclusive, one must participate at all organisational levels, be acknowledged as a participant, and accept full responsibility for contributing to the most critical outcomes. The idea behind this inclusivity is that each group member matters (Javed, Naqvi, *et al.*, 2019). Inclusion concerns situations where power imbalances and behaviours like seeking and embracing other individuals' opinions are encouraged. The basis for a strong relationship between leaders and followers is laid by inclusive leaders who emphasise shared advantages while concentrating leaders and personnel on shared goals (Javed, Naqvi, *et al.*, 2019). A friendly environment for all workers is established by inclusive leaders while maintaining a high degree of objectivity. Inclusive leaders accept others and recognise their contributions when facing crises, injustices, or conformist pressures (Javed, Naqvi, *et al.*, 2019).

Leaders promote an inclusive culture by empowering staff to participate in decision-making (Boekhorst, 2015). Employee input is therefore considered while making choices, and discussions are highlighted, encouraged and used to generate original ideas without relying on the skills of a single person; leaders with inclusive leadership traits fostered a quality link that encouraged fairness of input and output to all employees. Employees felt leaders' inclusive leadership qualities were fair in the effort-reward relationship, encouraging them to fulfil IWB job standards (Javed, Naqvi, *et al.*, 2019).

Because inclusive leaders demonstrate their availability by participating in work activities, employees are encouraged to develop, promote and carry out new and helpful ideas (Choi *et al.*, 2015). Inclusive leaders must consider their followers' desires, aspirations and emotions. Inclusive leaders pay close attention to what their team members say. Employees feel energised and more devoted to their employers, which makes them more ready to engage in extra-role behaviour like IWB (Javed, Abdullah, *et al.*, 2019).

Employees are motivated to actively participate in problem-solving efforts that need the development of novel concepts. In social exchange, inclusive leadership promotes healthy social ties, sharpens cognitive function, and inspires engagement in innovative endeavours (Javed, Naqvi *et al.*, 2019). Social exchange theory supported the link between IWB and inclusive

leadership. Workers are driven to commit to the leader and the organisation when the leader exhibits supportive and inclusive leadership qualities (Cropanzano *et al.*, 2017).

Additionally, inclusive leaders provide their staff with emotional support, which raises their credibility (Randel *et al.*, 2018). One of the most critical ways inclusive leaders support their staff even when original ideas do not work is by accepting responsibility for the end outcome (Javed, Naqvi, *et al.*, 2019). As a result, inclusive leaders demonstrate that they are moral beings capable of making wise decisions. Staff members are urged to display IWB because of this behaviour. Consequently, IWB's inclusive leadership fosters a culture where individuals are encouraged to take chances.

Psychological empowerment influences IWB. The cognitions, namely meaning, competence, self-determination, and influence, define psychological empowerment (Muduli, 2017). Studies show that psychological empowerment promotes decentralised organisational decision-making, enabling lower-level workers to participate actively. Employees are encouraged to contribute to the organisation's success since they appreciate their ideas and perspectives (Javed, Naqvi, *et al.*, 2019). The leader's involvement is crucial to establishing and preserving a pleasant workplace environment. Inclusionary leadership emphasises empowering followers and fostering common effects through increasing followers' autonomy, competence and accountability. Inclusive leaders communicate a vision, pay attention to and address the opinions of their followers and appreciate their contributions (Javed, Abdullah *et al.*, 2019).

Inclusive leaders who offer their staff the freedom to make decisions give them authority. When leaders are inclusive, their individuals feel respected at work, and employees who value their inclusion feel more powerful (Randel *et al.*, 2018). The inclusive leader's construction of a supportive external environment is one of the essential situational factors since it enables staff to experience psychological empowerment and internal motivation. Increased employee autonomy and competence, which enhances intrinsic motivation, can significantly influence the job's meaning and impact (Javed *et al.*, 2021).

Various intrinsic motivators, such as purpose, competence, self-determination and results, influence ideas at work. These components will probably enhance the execution of ideas and significant change concepts, resulting in a more innovative workplace (Javed, Naqvi, *et al.*, 2019). Because of a psychological sense of empowerment and conviction supplied by all the assistance and resources available to implement such ideas, producing innovative ideas is a non-routine activity requiring individuals to go above and beyond their standard operating processes (Muduli,

2017). Employees who feel empowered may think more freely and are more confident that their comments will be taken seriously. Employees that felt empowered felt less constrained by conventions and other individuals. Employee participation was improved when they felt empowered (Javed, Abdullah, *et al.*, 2019).

Research has shown that psychological empowerment can raise IWB (Stanescu *et al.*, 2020). Innovative ideas are more likely to be created by motivated employees with a sense of purpose. Individuals are motivated to put their ideas into practice by psychological empowerment attributes, including competence, control, autonomy and belief in one's ability to make a difference. It is plausible to conclude that IWB is connected to psychological empowerment (Javed, Abdullah *et al.*, 2019).

Inclusive leadership and IWB are related (Mansoor *et al.*, 2021). When inclusive and relational leadership are practised, employees participate actively in decision-making and work processes. Individuals are more willing to take a chance by questioning the status quo and disagreeing with their leaders because IWB is demonstrated in an inclusive culture where employees receive high levels of support from their leaders. New individuals think beyond the box, and innovative ideas differ from conventional work approaches. Employees look to innovation for psychological empowerment to allay their fears of potential reprisal or job loss. Leadership that is inclusive and psychological empowerment go hand in hand. Individuals might feel more empowered in several ways under inclusive leadership. For instance, inclusive leaders directly invite employees to join in productive and creative activities (Mansoor *et al.*, 2021). Therefore, workers felt more purposeful at work.

Additionally, inclusive and personable leaders serve as examples for the rest of society. IWB and psychological empowerment have a positive relationship; staff who believe they are successful are more willing to challenge accepted workplace norms and provide novel ideas (Javed, Naqvi, *et al.*, 2019). Virtual learning has primarily replaced the outdated practice of classroom instruction in educational institutions. In higher education, these changes may serve as benchmarks for recognising faculty members' IWB. Many individual and institutional factors have influenced the IWB members (Alfy & Naithani, 2021). Due to competition, government budget constraints, the diversification of labour market demands, and the continued need to deliver high-quality educational services, there is a demand for faculty members to create IWB (Lambriex-Schmitz *et al.*, 2020; Shafait *et al.*, 2021). As a result, the IWB of instructors is influenced by a conducive learning environment in the classroom (Ayoub *et al.*, 2021; Hosseini & Haghighi Shirazi, 2021).

IWB influences work-based performances. IWB states that reflection related to improving performance and competence may result from IWB, offering a thorough conceptualisation of the intricate concept of IWB while also outlining its structural elements (De Bruin & Steyn, 2019; Messmann & Mulder, 2012). It has also been stressed that IWB shows up when there are difficulties or obstacles at work and strives to offer innovative solutions to such problems or challenges (Ayoub *et al.*, 2021; Carmeli *et al.*, 2006; Noefer *et al.*, 2009). One of the essential elements for organisational development in both the public and private sectors is IWB (Abdullatif *et al.*, 2016). Staff members produce, develop, promote, realise, implement and adjust new ideas to improve performance as part of an interconnected series of processes known as IWB. IWB refers to employee behaviours that support the creation and adoption of innovations at work, both directly and indirectly. Earlier investigations have demonstrated its complexity by seeking to comprehend the sources, structures and effects of the IWB phenomenon. These parameters include the appropriate number of dimensions, the handling of the IWB conundrum, and the circumstances in which IWB should be applied (Baharuddin *et al.*, 2019; De Bruin & Steyn, 2019; De Jong & Den Hartog, 2008; De Jong & Den Hartog, 2010; Lambriex-Schmitz *et al.*, 2020; Messmann & Mulder, 2012, 2020; Scott & Bruce, 1994). The number of applied dimensions and the setting in which they were employed impact the reliability of the IWB measures that have been produced.

IWB is a process that can be taught. Earlier studies looked at various aspects of employees' IWB in different industries and investigated the factors influencing teachers' innovative behaviour at work (Thurlings *et al.*, 2015). Some studies focused on IWB and specific employees' innovative objectives. Others, however, demonstrated that in addition to favourably predicting job engagement, a learning organisation also served as a substantial positive predictor of IWB (Hosseini & Haghighi Shirazi, 2021; Zhang *et al.*, 2021). Teachers must actively participate in developing and implementing educational innovations if they want to act creatively. IWB enables higher education institutions to more effectively and efficiently reinvent their teaching and knowledge-sharing (Lambriex-Schmitz *et al.*, 2020). There will soon be a significant increase in demand for innovative teachers due to the significant changes that must be made in education at all levels and the shifting roles that teachers must play to keep up with the constantly evolving labour market (Ayoub *et al.*, 2021; Lambriex-Schmitz *et al.*, 2020).

IWB might be a novel crisis management tool. Because of this, several researchers have tried to pinpoint the factors that favour IWB. Five factors have been shown to have an impact on IWB. The following are these variables: person-specific, employment-specific, team-specific, interpersonal and organisational (West *et al.*, 1990). Additionally, more innovative businesses

have a more extraordinary ability than others to obtain the resources needed to improve performance and influence the environment favourably (Bommer & Jalajas, 2004). Given the multidimensionality of the IWB, many researchers have criticised the unidimensional approach. Researchers have also measured IWB in two dimensions (De Jong & Den Hartog, 2007; Spiegelaere *et al.*, 2012; Yuan & Woodman, 2010). They have focused on only two essential components of IWB measurement: idea generation and concept execution. As a technique for quantifying IWB, several researchers have suggested the three-dimension model, which comprises idea generating, idea advocacy and idea execution (Carmeli *et al.*, 2006; Janssen, 2000; Messmann & Mulder, 2011; Reuvers *et al.*, 2008; Scott & Bruce, 1994).

According to De Jong and Den Hartog (2010), the four-dimensional approach, which encompasses idea generation, promotion, realisation and implementation, is the most helpful tool for evaluating IWB. Employees continuously explore the first dimension of the workplace in quest of a new opportunity or solution to a brewing problem. Workers investigate innovative approaches and methods in the second dimension to seize opportunities and find a new solution to a persistent or newly emerging problem. Third, employees might plan or take the helm of a promotional rally to convince sponsors and managers to provide the funding necessary to develop fresh ideas. Implementing the offered concept or cure is the fourth dimension (Ayoub *et al.*, 2021; De Jong & Den Hartog, 2010; Janssen, 2005; Kleysen & Street, 2001).

IWB refers to the deliberate development of new and valuable ideas and their promotion and application within a work setting, group or organisation (West & Farr, 1989). The three steps of the individual IWB process are idea generation, concept promotion and idea realisation (Kleysen & Street, 2001). Idea promotion is challenging and dangerous (Kanter, 1984). Risk tolerance is a critical prerequisite because of the significant degree of objective ambiguity in IWB. For risk-averse individuals, undertaking tasks with ambiguous goals can be challenging. Uncertain goals increase the likelihood of failure in such tasks. Fear of failing is another characteristic that defines impostors (Neureiter & Traut-Mattausch, 2016). Thus, it could be challenging for impostor leaders to participate in IWBs.

3.5.3 Innovative Work Behaviour Measuring Instruments

Various instruments have been developed to measure the influence of the IP on individuals. The Janssen IWB Scale is a self-report questionnaire designed to measure employees' innovative work behaviour in different organisations. Janssen developed the scale based on a review of the literature on innovative behaviour and input from experts in the field. The Janssen IWB Scale

consists of 10 items that measure three dimensions of innovative work behaviour: idea generation, idea promotion and idea realisation. Respondents rate their level of agreement with each statement on a 5-point scale, ranging from strongly disagree to strongly agree. Janssen created products emphasising concept development, marketing and implementation. Nevertheless, he concluded that his items should be united and used as a single element because of solid links (Janssen, 2000). This study focused on concept generation, promotion and realisation, but little effort was made to distinguish between these components in their empirical investigations (Reuvers *et al.*, 2008). This survey seeks to elicit many measurements of a person's innovative behaviour. The questionnaire examined concept generation, advocacy and execution components.

The de Jong and Den Hartog Innovative Work Behaviour Scale (IWB) is a self-report questionnaire that measures employees' innovative work behaviour in different organisations. De Jong and Den Hartog developed the scale based on a literature review of innovative behaviour and input from experts in the field. The de Jong and Den Hartog IWB Scale consists of 17 items that measure four dimensions of innovative work behaviour: idea generation, idea promotion, idea realisation and proactive problem-solving. Sample items include "I often think of new ways to do my work," "I am good at convincing others of the value of my ideas," "I often take the initiative to implement my ideas," and "I frequently try to solve problems before they become serious". Respondents rate their level of agreement with each statement on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This questionnaire scaled IWB, covering ten elements covering four dimensions – idea genesis, investigation, advocacy and execution. This questionnaire aims to extract many aspects of a person's innovative behaviour (Scott & Bruce, 1994).

The Ayoub Innovative Work Behaviour Scale (AIWB) is a self-report questionnaire that assesses the extent to which individuals engage in innovative behaviours in the workplace. The scale consists of 20 items that measure four dimensions of innovative work behaviour: idea generation, idea promotion, idea realisation and proactive problem-solving. The idea generation dimension measures an individual's ability to generate new and original ideas, while the idea promotion dimension assesses how individuals share their innovative ideas with others. The idea realisation dimension measures the ability to implement innovative ideas, and the proactive problem-solving dimension assesses an individual's willingness to take the initiative to solve problems in novel ways (Ayoub *et al.*, 2021). The following section discusses the relationship between the IP, self-esteem, decision-making self-efficacy and IWB.

3.6 RELATIONSHIP BETWEEN THE IMPOSTOR PHENOMENON, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR

This study examined how the IP affects a leader's abilities, capacity for judgement and IWB. Self-esteem is a mediating factor in the link between the three constructs. The review indicated that leaders' sense of self-worth significantly impacts impostorism. Despite contradicting findings from empirical studies tying the phenomenon to self-esteem, self-esteem issues are at the core of the IP. The IP has been connected to perfectionism. The link between perfectionism and perceptions of the impostor is mediated by self-esteem (Cokley *et al.*, 2018). This literature review demonstrated that eliminating self-doubt before specific scenarios aids in eliminating sentiments of impostorism (Clance & Imes, 1978). More studies on the IP emphasise the vital significance of self-esteem. The IP is a false sense of self-worth that can substantially impair a person's sense of value, even though it is not a mental condition (Leahy, 2005). Individuals who experience the IP frequently attribute their poor self-esteem and sense of worthlessness to others (Walton & Cohen, 2007).

Self-esteem concerns are at the heart of the IP (Harvey, 1981; Schubert & Bowker, 2019; Topping, 1983). Self-esteem is more psychological than a barometer of well-being because it is a socially formed and experienced idea (Hewitt, 2020). It is a psychological term that gauges how positively individuals view themselves, others and the world around them. Being capable of overcoming obstacles, being open to interacting with others, and balancing one's social obligations and personal needs are signs of high self-esteem (Garrety *et al.*, 2003). In addition to self-esteem, there are further considerations. Instability is one of the traits that may be connected to the IP. Self-esteem instability can be identified by changes in a person's self-esteem over time and in response to changing circumstances (Schubert & Bowker, 2019).

Langford and Clance (1993) claim that impostors are denied the constructive atmosphere necessary for building strong self-esteem. They, therefore, want to become an idealised version of themselves. Positive value views that change in response to changing circumstances and do not need constant confirmation and defence constitute healthy self-esteem (Schubert & Bowker, 2019). Unlike those with impostor symptoms, individuals with constant self-esteem tend to value and accept themselves for who they are, flaws and all. As a result, they are less likely to struggle with low self-esteem and do not feel pressured to demonstrate their worth.

Impostors' actions are motivated by a desire for self-preservation and self-improvement. To validate their delusions of intellectual prowess and raise their self-esteem, impostors aim for high levels of personal achievement (Langford & Clance, 1993). As a result, impostors avoid situations

that might lead to negative comments about their competence (Dudău, 2014; Ross & Krukowski, 2003). Impostors rely on rigid work procedures to avoid making errors. These techniques guard their self-esteem (Schubert & Bowker, 2019). Impostors tend to self-handicap when faced with success. When they succeed, their sense of competence increases, but only temporarily; when they fail, their sense of competence decreases (Want & Kleitman, 2006).

Both their abilities and how they feel about their self-efficacy impact impostors. The competence efficacy-based self-esteem component covers how individuals see their skills and efficacy (Gecas & Schwalbe, 1983; Owens, 1994; Rosenberg *et al.*, 1995). The value-based component of self-esteem is concerned with how much individuals value themselves. Typically, self-esteem research has followed one of these conceptualisations in lockstep, with one conceptualisation being examined separately from the others (Cast & Burke, 2002).

Decision-making and problem-solving skills are necessary for self-regulation. It has been demonstrated that one's self-efficacy beliefs affect how successfully and competently one handles problems and makes judgements. Others who are confident in their abilities to make judgements and deal with difficulties when faced with challenging situations and options use their cognitive resources more efficiently than individuals who lack that confidence (Kim, 2015).

Self-efficacy has been shown to impact organisational performance by influencing decisions. Wood and Bandura (1989) found that high levels of self-efficacy encouraged the adoption of higher standards and more analytical problem-solving techniques to boost performance when participants were given decision-making assignments to achieve certain levels of organisational performance (Bandura & Wood, 1989; Bandura & Jourden, 1991). A person's emotional responses to difficulties and judgements of discrepancies between goals and performance in the here and now are influenced by their self-efficacy beliefs. Making decisions and passing judgement with certainty rather than uncertainty could be more accessible. Therefore, individuals with greater decision-making self-efficacy could be less likely than those with lower levels of the same to experience post-decision self-regulatory tiredness (Russell & Worsley, 2013). Self-esteem is a vital aspect of life that affects many things, including performance and employment. Self-efficacy in making professional decisions is substantially predicted by self-esteem and other basic self-assessments (Betz *et al.*, 1996).

Poor performance and poor decision-making have both been linked to low self-efficacy. Decision-makers who believed they were making progress on organisational tasks outperformed other decision-makers in terms of success, goal-setting and organisational performance, according to Bandura and Jourden (1991). Using self-effect efficacies on professional advancement, it has

also been demonstrated that self-efficacy and selection are related (Bandura, 1993; Bandura & Jourden, 1991; Lent *et al.*, 1994).

Studies predict that the IP would decrease occupational self-efficacy, career exploration and adaptive career planning responses while escalating professional decision-making difficulties. Both students and workers in the workforce should avoid this effect while choosing a career. Individuals who encounter the IP are less likely to pursue leadership or higher positions at work or in life (Neureiter & Traut-Mattausch, 2016; 2017). Given that impostors are convinced that they are merely acting confident in their abilities, it should be no surprise that they find it difficult to envision themselves in other, perhaps more successful, professional situations (Neureiter & Traut-Mattausch, 2016).

The researchers hypothesised that the IP would harm occupational self-efficacy, career planning and career exploration but have a favourable relationship with career decision-making concerns (Neureiter & Traut-Mattausch, 2017). The results show that higher self-esteem is associated with better decision-making self-efficacy and more deliberate decisions. Low self-esteem impostors lack the confidence to make wise decisions; common decision-making strategies include avoidance, delay, neglect and hypervigilance (Filippello *et al.*, 2013).

Self-efficacy has been proven to affect organisational performance through decision-making. Wood and Bandura found that when participants were given decision-making tasks to complete, high levels of self-efficacy promoted the adoption of higher standards and more analytical problem-solving strategies to increase performance (Bandura & Wood, 1989; Bandura & Jourden, 1991). Decision-makers were more productive, set more challenging goals and outperformed their counterparts in organisational performance when they felt they were progressing on organisational tasks. The relationship between self-efficacy and selection has also been shown using self-efficacy in career development (Bandura, 1993; Bandura & Wood, 1989; Bandura & Jourden, 1991; Lent *et al.*, 1994).

Decision-making and self-esteem are strongly linked. The findings demonstrate that greater levels of self-esteem are linked to better judgement and self-efficacy in making judgements. Individuals with poor self-esteem lack confidence in making sensible decisions: Common decision-making techniques include avoidance, delay, carelessness and hypervigilance (Filippello *et al.*, 2013). Our self-efficacy beliefs influence our feelings, effort and tenacity in the face of difficulty.

A high level of self-efficacy makes one more likely to embark on challenging jobs that need innovative ideas (Hsiao *et al.*, 2011). Innovation and self-efficacy are combined (Kumar & Uz Kurt,

2011). Individuals with higher levels of self-assurance tend to be more innovative. Some believe self-efficacy and innovative professional behaviour are inextricably linked (Hsiao *et al.*, 2011). Higher levels of creative self-efficacy among employees are associated with higher levels of creativity at work. Implementing new ideas will be aided by a clearly stated goal (Janssen, 2000). The research found that those with high levels of self-efficacy are more likely to be motivated to act, give their actions more effort, and persist in facing hardship. When these findings are applied to leadership, research demonstrates that individuals with higher levels of confidence in their capacity to use crucial leadership qualities do so more frequently and effectively than those with lower confidence levels (Bandura & Jourden, 1991; Gist & Mitchell, 1992).

This claim is supported by more recent studies tying self-efficacy to successful leadership and earlier meta-analyses linking self-efficacy to overall work performance (Anderson *et al.*, 2008). Individuals with high self-efficacy are more likely to be inspired to act, put up more effort while acting, and endure when things get tough. Applying these findings to leadership, research demonstrates that individuals who feel more capable of exercising essential leadership qualities do so more regularly and successfully than those who do not (Anderson *et al.*, 2008). The IP might significantly impact a leader's self-efficacy. Leaders must be aware of, analyse and manage this phenomenon to decrease its effects. The part that follows will go into further detail on leadership strategies. This section discusses self-efficacy as a research auxiliary for this study. No connection was found to accept that IP influences decision-making, which in turn influences IWB.

Decision-making and problem-solving skills are necessary for self-regulation. It has been demonstrated that one's self-efficacy beliefs affect how successfully and competently one handles problems and makes judgements. Others who are confident in their abilities to make judgements and deal with difficulties when faced with challenging situations and options use their cognitive resources more efficiently than individuals who lack that confidence (Kim & Sohn, 2019). Given this preliminary proof of this phenomenon's detrimental consequences on professional development, a theoretical framework is required to comprehend its implications fully.

Self-efficacy has been shown to impact organisational performance by influencing decisions. Wood and Bandura (1989) found that high levels of self-efficacy encouraged the adoption of higher standards and more analytical problem-solving techniques to boost performance when participants were given decision-making assignments to achieve certain levels of organisational performance (Bandura & Wood, 1989; Bandura & Jourden, 1991). A person's emotional responses to difficulties and judgements of discrepancies between goals and performance in the

here and now are influenced by their self-efficacy beliefs. Making decisions and passing judgement with certainty rather than uncertainty could be more accessible. Therefore, individuals with greater decision-making self-efficacy could be less likely than those with lower levels of the same to experience post-decision self-regulatory tiredness (Russell & Worsley, 2013). Self-esteem is a critical component of life that has an impact on a variety of areas, such as performance and employment. Self-esteem and other fundamental self-assessments substantially influenced self-efficacy in professional judgment (Betz *et al.*, 1996).

Low self-efficacy has been associated with substandard performance and bad decisions. Decision-makers who believed they were progressing on organisational tasks were more successful, set higher targets, and produced more extraordinary organisational performance than other decision-makers (Bandura & Jourden, 1991). Self-effect efficacies on career progression have also been used to establish the connection between self-efficacy and selection (Bandura, 1993; Bandura & Jourden, 1991; Lent *et al.*, 1994).

Studies predict that the IP would lessen occupational self-efficacy, career exploration and adaptive responses to career planning while posing more hurdles to professional decision-making. Individuals who experience the IP are less likely to take on leadership roles or aim for higher positions in general and in their place of employment (Neureiter & Traut-Mattausch, 2016, 2017). Students and professionals in the workforce should avoid this influence while planning their careers.

The IP and self-efficacy in research are negatively correlated (McDowell *et al.*, 2015). The researchers, therefore, predicted that the IP would have a poor association with career planning, career exploration and occupational self-efficacy” but a positive link with career decision-making issues (Neureiter & Traut-Mattausch, 2017). Poor self-esteem makes individuals less confident in making wise decisions: Avoidance, delay, neglect, and hypervigilance are typical decision-making strategies (Filippello *et al.*, 2013).

No connection was found to accept that self-esteem influences decision-making and influencing IWB. For self-regulation to occur, decision-making and problem-solving abilities are required. Self-efficacy beliefs have been shown to influence how well and successfully individuals handle issues and make decisions. When presented with difficult choices and situations, those who believe in their ability to make decisions and solve problems using their cognitive resources more effectively than those who do not (Kim & Sohn, 2019). Self-efficacy has been proven to affect organisational performance through decision-making. When participants were given decision-making tasks to complete, Wood and Bandura (1989) discovered that high levels of self-efficacy

promoted the adoption of higher standards and more analytical problem-solving strategies to increase performance (Bandura & Wood, 1989; Bandura & Jourden, 1991).

A person's emotional responses to difficulties and perceived discrepancies between goals and performance in the present are influenced by their self-efficacy beliefs. It could be more accessible to choose and make confident judgements than uncertainty. As a result, persons with higher decision-making self-efficacy may be less prone than those with lower levels to experience post-decision self-regulatory fatigue (Russell & Worsley, 2013). Self-esteem is a vital aspect of life that affects many aspects, including performance and employment. Self-esteem and other basic self-assessments significantly predicted self-efficacy in making professional decisions (Betz *et al.*, 1996).

Low self-efficacy has been associated with substandard performance and bad decisions. Decision-makers who believed they were making progress on organisational tasks were more successful, set higher targets and produced more excellent organisational performance than other decision-makers, according to Bandura and Jourden (1991). Self-effect efficacies on career progression have also been used to establish the connection between self-efficacy and selection (Bandura, 1993; Bandura & Jourden, 1991; Lent *et al.*, 1994). The IP and doctorate candidates' self-efficacy in research are negatively correlated (McDowell *et al.*, 2015). The researchers, therefore, predicted that the IP would have a poor association with career planning, career exploration and occupational self-efficacy but a positive link with career decision-making issues (Neureiter & Traut-Mattausch, 2017). Decision-making and a sense of worth go hand-in-hand. The findings demonstrate that greater levels of self-esteem are linked to better judgement and self-efficacy in making judgements. Individuals with low self-esteem are less capable of making sensible decisions: Common decision-making techniques include avoidance, delay, carelessness and hypervigilance (Filippello *et al.*, 2013).

The essential concepts in this study are crucial notions central to a subject or field of study that aid in defining this research problem. These concepts connect the study's primary constructs, the IP, self-esteem, innovative work behaviour and decision-making self-efficacy. The literature review for this study was presented in this chapter. Inductive reasoning was used as a logic analysis technique in this chapter, which resulted in the literature review's development and served as the study's foundation. Inductive reasoning produces inferences and hypotheses based on observation, progressing from the precise to the entire. As a result, various assumptions were used to get a broad conclusion.

This chapter covered the IP, leadership skills, IWB and decision-making. The IP was investigated as an individual experience of believing that one is not as qualified as others believe (naturalistic research), as well as the structure of this phenomenon in the business world as leadership praxis in a physical condition, based on a literature review presented in this chapter (inductive study).

Organisations must prioritise efficient personnel and leaders in today's economy to keep up with shifting customer expectations (Teece, 2016). The human capital theory is based on this growing emphasis on efficient employees. Human capital is an individual's skills, talents, competencies and other qualities (Craciun, 2015). Successful management requires a combination of technological, human, and mental management capabilities. Leaders are responsible for overseeing processes, developing plans, and delivering services within their respective departments. In addition, leaders must possess the necessary administrative skills to fulfil various responsibilities. At the executive level, leadership skills are crucial for gaining a holistic view of the organisation. Planning and dealing with abstract concepts and principles require conceptual ability. Furthermore, supervisors must possess technical knowledge in their field of expertise to supervise their teams effectively.

Organisational leaders must manage human resources (Bontis & Fitz-enz, 2002). The capacity management discipline includes understanding, preparing for and deploying individuals and their talents. They must also include the skills needed for specific jobs, the capabilities of each person, and any differences between them. A company's CEO and employees must know their strengths and weaknesses to progress in these areas. At every level of their careers, outstanding leaders are impacted by the impostor problem. Leaders who feel insufficient and fear failure could be reluctant to accept risky duties. The fundamental belief of impostors is that if they make essential decisions that impact the organisation, their incapacity or ineptitude would be shown, and they would be outed as frauds (King & Cooley, 1995; Leary & Baumeister, 2000; Neureiter & Traut-Mattausch, 2016). Fake self-critical bosses can encourage their teams to be perfectionists or workaholics, increasing staff turnover and absenteeism (Aparna & Menon, 2020).

Researchers have poor opinions about the ability of managers and leaders who experience the IP. Task delegation decisions by managers are impacted by their perception of themselves as frauds in their roles (Rohrmann *et al.*, 2016). Since they are less aware of their talents and abilities, impostors are less inclined to investigate alternative employment opportunities. According to impostors, a job might be obtained through chance, being at the right place at the right time, or knowing the right individuals. As a result, they are less involved in their professional

growth. Furthermore, prior research indicates that IP may affect occupational self-efficacy (Clance & Imes, 1978).

The IP and post-graduate students' self-efficacy in research are negatively correlated (McDowell *et al.*, 2015). It is believed that impostors struggle to see themselves in other potentially more successful professional positions, given their conviction that they are merely pretending to be confident in their talents (Neureiter & Traut-Mattausch, 2016). As a result, researchers anticipate that the IP would favourably correlate with professional decision-making issues and be negatively associated with "career planning, career exploration and occupational self-efficacy" (Neureiter & Traut-Mattausch, 2017).

Studies show that the IP might lessen professional decision-making problems and increase adaptive responses to "career planning, exploration and occupational self-efficacy". Students and professionals in the workforce should avoid this influence while planning their careers. Individuals who encounter the IP are less inclined to assume leadership responsibilities or strive for higher positions in general and within their work (Neureiter & Traut-Mattausch, 2016; 2017). The learning and career development area of HRD frequently ignores the impostor problem. The main reason is that not even corporate training specialists understand it. The treatments primarily target organisational stress and anxiety, paying little attention to the possibility that the IP serves as a precursor to these results (Aparna & Menon, 2020; Clance, 1985; Rohrmann *et al.*, 2016).

3.7 SUMMARY

In this chapter, the literature review for this research was presented. This chapter explained the main construct of this research, the IP, which included the phenomenon's history and origin. This section also includes the impostor loop, influences, triggers of IP, coping mechanisms, tools to measure IP and types of impostors. This literature review also discussed self-esteem, IWB and self-efficacy decision-making. The following themes were addressed:

- Self-esteem: The role of self-esteem in the validation of oneself, self-esteem as a mediator and the relationship between self-esteem and the IP and leadership;
- Self-efficacy: The role of self-efficiency in motivation; self-efficiency as a mediator, and the relationship between self-efficacy and the IP and decision-making;
- Leadership decision-making: the process of decision-making and influencing factors; and

- IWB: The dimensions of IWB, the measurement of this construct the innovation of psychosocial contract and leadership in IWB, and the relationship of these concepts were discussed.

In conclusion, Chapter 3 has provided a comprehensive literature review encompassing key dimensions related to the imposter phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour. The exploration of the imposter phenomenon unveiled its multi-dimensional nature and its manifestation within the professional realm, particularly among managers and leaders. This review further delved into the measurement instruments employed to assess the imposter phenomenon's intricacies. Similarly, the examination of self-esteem illuminated its various dimensions, especially concerning managers and leaders, along with the assessment tools deployed for its evaluation. The discourse on decision-making self-efficacy elucidated the multifaceted aspects of decision-making and its correlation with managerial and leadership contexts, complemented by insights into measuring this construct.

Additionally, the scrutiny of innovative work behaviour unveiled its dimensions and its relevance within the managerial and leadership domains, supplemented by a discussion on pertinent measuring instruments. The literature review culminated with an examination of the interconnectedness between the imposter phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour, offering a preliminary glimpse into the complex interplay of these factors. In summation, this chapter has significantly contributed to the foundational understanding of the research constructs, paving the way for the subsequent development of the proposed framework.

In the next chapter, the research methodology is discussed in more detail. This section includes terminology often associated with the basic research paradigm, such as the research method, Ontology, epistemology, theoretical perspective, methodology and the method of this study.

CHAPTER 4

RESEARCH METHODOLOGY AND DESIGN

“One of the ways to get out of a tight box
is to invent a way out”
- Jeff Bezos -

4.1 INTRODUCTION

The research methodology in this chapter provides the specific procedures used in this study to identify, select, process and analyse information about the IP on the research constructs, which aimed to answer the research questions presented in this study. It defines the overall approach and explains how data were collected and analysed within this study. Within this chapter, further explanations related to the research methodology of this study are presented. This includes the assumptions, the research methodology, the design philosophy and the method. Details on the population, the instruments used, data collection methods and analysis procedures are provided.

4.2 RESEARCH PHILOSOPHY

This research philosophy is a collection of beliefs about how data in this study were gathered, analysed and used. Additionally, it includes several study approaches, such as epistemology, the notions of justified belief and opinion, and the idea of knowledge, particularly concerning its techniques, reliability and extent. Table 4.1 below summarises the research methods applied in this study with a description of each:

Table 4.1: Summary: The Research Paradigm in this Study

AREA	DESCRIPTION
Research Paradigm	Positivism
Terminology is often associated with the basic research paradigm	Experimental
	Correlational
	Reductionism
	Theory verification
Basic Methods	Casual comparative
Basic Methods	Quantitative methods
Ontology <i>What exactly is reality?</i>	Native realism Knowable objective reality
Epistemology <i>How does one know what is true?</i>	Objectivism, Dualist objectivist. Confirmed results established as factor axiom.
Theoretical Perspective <i>Does anyone have any knowledge of which solution I am referring to?</i>	Positivism
Methodology <i>How does one go about determining this?</i>	Ethnography Phenomenological studies

AREA	DESCRIPTION
	Heuristic investigation Feminist perspective
Method <i>What methods does one use to ascertain this?</i>	Logical Deduction Scientific grounded Internal and external validity

(Source: Authors' own)

The Positivism philosophy is predicated on the idea that reality is unchanging, objective, and subject to objective measurement (Creswell & Creswell, 2017). Positivists observe and quantify what is real. To test hypotheses or ideas, the emphasis is gathering evidence that can be measured and statistically examined. In the scientific sciences and several branches of the social sciences, positivism is prevalent and often incorporates experimental or quasi-experimental research designs (Babbie, 2016).

The philosophical views of French philosopher August Comte serve as the foundation for the positivist paradigm for examining social reality. He believed reason and observation were the finest tools for understanding human behaviour. He also believed observation and experimentation were the best ways to get authentic knowledge based on sensory experience (Henning *et al.*, 1998).

Positivism assumes that reality is supplied objectively and measured using characteristics independent of the investigator and the researcher's tools; thus, knowledge is objective and quantifiable. This assumption is made at the ontological level. Within this study, positivistic thinkers apply scientific methodologies and standardise the knowledge-generating process with quantification to improve clarity in describing variables and their connection. Positivism aims to discover and demonstrate the truth through facts (Babbie, 2016).

Positivism sees human behaviour as passive, under the influence, and decided by the outside world (Babbie, 2016). According to Walsham, the positivist stance asserts that scientific knowledge is comprised of facts and that its ontology views reality as autonomous of social construction (Walsham, 1995). The researcher can adopt an "objectivist" perspective if the research involves a predictable and unaltered reality. This perspective is based on a realist ontology, which is the belief in an objective, real world, and a disconnected epistemological position based on the assumption that people's perceptions and declarations are either incorrect or correct, right or wrong. It also relies on the idea that knowledge is hard, real, and acquirable (Antwi & Hamza, 2015).

Positivism is often connected to a quantitative research philosophy which seeks to understand reality objectively by methodical observation, measurement, and statistical analysis. By adopting this approach within this study, overarching principles and patterns governing this phenomenon were studied (Babbie, 2016). This study used scientific procedures to obtain and analyse data to comprehend and explain social phenomena. This method aimed to identify causal connections between the research constructs and develop overarching rules or theories that may be used in various situations (Hennink *et al.*, 2020).

A quantitative research approach was used in this investigation. Positively oriented quantitative research is based on numerical data that can be quantified and examined using statistical methods. Typically, surveys, tests, or other techniques that enable the measurement of variables are used to gather organised data. According to a deductive methodology, and as within this study, researchers create hypotheses based on existing ideas or empirical findings and then rigorously verify these assumptions (Babbie, 2016). This investigation sought to explain phenomena using numerical data that has been investigated using mathematically based methodologies, most notably statistics (Yilmaz, 2013).

The characteristics of positivism that support this quantitative research are as follows (Bryman, 2016): The link between the selected components was investigated using a quantitative cross-sectional questionnaire. Based on the research of Ibrahim *et al.* (2020), Rosenberg (1965), Myburgh *et al.* (2015), and Ayoub *et al.* (2021), the questionnaires were developed. The necessity of objectivity in the study is emphasised by positivism. By using established techniques and processes for data gathering and analysis, it seeks to reduce bias and subjective interpretation. Positivists emphasise empirical data as the cornerstone of knowledge. They support the collection of data via organised experimentation and observation. Quantitative research techniques including surveys, experiments, and statistical analysis are used to obtain empirical data and test ideas.

In this research, managers/leaders in South Africa were the population of interest, and cross-sectional surveys were utilised to infer characteristics of that group based on a subset of that population. Positivists aim to extrapolate their conclusions from the study's particular environment. They seek to construct universal rules or principles to apply to comparable circumstances. Large sample sizes and representative sampling methodologies were used to ensure the generalisability of research results.

This study examined the effect of the IP on two leadership competencies—decision-making self-efficacy and IWB—. The research also emphasised the function of self-esteem as a mediating variable in the link between leadership abilities, namely decision-making self-efficacy and IWB (dependent variables) and IP (independent variable). Positivism focuses on figuring out the causes and effects of various factors. To examine data and identify causal relationships, researchers use statistical techniques. The objective is to explain occurrences by figuring out what causes specific results.

4.3 RESEARCH DESIGN

Cross-sectional research analyses how individuals differ by gathering data from many participants. It was determined that a cross-sectional correlational questionnaire approach would be adequate to answer the study questions. Cross-sectional studies are less expensive and take less time to conduct than other forms of research since they gather data at a particular moment.

A research design is a collection of logically connected configurations from which scientists can choose the best configuration for their study sample. The researcher will determine whether to conduct a descriptive, exploratory, or descriptive analysis depending on the study's intended audience (Babbie, 2016). For example, exploratory research may be necessary to evaluate and create a hypothesis for a problem for which little is known due to a lack of fundamental understanding, a new field of interest, or the requirement of exploring and developing a hypothesis for a problem little is known. Social science is commonly used to examine subjects or when a researcher adopts a new interest better to understand the subject (Babbie, 2016). The goal is to analyse or learn more about this phenomenon and how it may affect a person's ability to make effective decisions and exhibit IWB (De Vos *et al.*, 2011). This study is included in exploratory research.

A study methodology is a methodical way to solve a research issue by deductively evaluating the actions, processes, and methods used by the researcher (Kothari, 2004). A theoretical framework is a conception of a complete thesis that guides throughout the analysis process and as a theoretical basis for explaining and conceptualising the study's philosophical, epistemological, methodological, and analytical approaches (Grant & Osanloo, 2014).

Collecting and analysing numerical data is part of the quantitative research process. This approach offers advantages to recognising patterns and averages, predicting, examining causal links and extending results to more prominent groups. This approach is used in descriptive,

correlational and experimental studies. This study method summarises a study's variables for evaluation as part of this descriptive research. Correlational research examines the correlations that exist between the variables in a study. An exploratory analysis aims to ascertain if two variables have a causal link.

This study investigated whether the IP affects leaders' IWBs and decision-making self-efficacy as part of their leadership abilities, assessing the link between these constructs. Experimental research investigates whether variables are related in a cause-and-effect manner. The projected hypotheses are tested using correlational and experimental research methods, like in this study, to establish the relationship between the constructs and gauge the magnitude of the effect. The findings may be applied to more significant populations.

This examination uses descriptive, experimental and correlational research methodologies. A summary of the variables addressed in this study is given as part of descriptive research, including the IP and its effects on IWB and decision-making self-efficacy. Correlational research examines the links between study variables. This study determined the effect of impostors and non-impostors within leadership on the selected areas.

A visual construct is designed within this study to provide an overview. This construct is a visual or abstract concept explicitly generated to describe the goals of a research theory (Legget, 2011). Specific topics describe a construct, enabling generalisation from definitions to other observations about a given word (De Vos *et al.*, 2011). A theoretical construct is a list of terms, meanings, and current hypotheses a researcher uses to understand related theories and ideas (Labaree, 2021). A theoretical construct can help predict how variables behave or solve problems (Jax, 2017).

Establishing a theoretical construct benefits the researcher when they do their study. For example, factual statements within theoretical assumptions enable critical analysis; a theoretical construct connects the researcher to existing knowledge, and the underlying concepts of a study compel the researcher to respond to questions (Labaree, 2021).

After completing a literature study and gathering the data using questionnaires, it would be feasible to ascertain the effect of the IP on the chosen leadership abilities, IWB and decision-making self-efficacy. The focus of the theoretical framework for this study is composed of a visual and abstract matrix. The construct would ultimately fit characteristics correlated with the IP to ascertain the impact on leaders. Additionally, the construct aided in deciding which mechanisms should be used when identifying this phenomenon within a leadership context. The research methodology is presented next.

4.4 RESEARCH METHODOLOGY

In this study, a quantitative research strategy was employed. This examination aimed to explain phenomena using numerical data that has been studied using mathematically based approaches, most notably statistics (Yilmaz, 2013). This method examined the conditions or events that impact leaders influenced by the IP. The study's data were analysed to find patterns and averages about the IP, decision-making, self-efficacy and innovative work practices. This research approach produced objective facts successfully communicated via statistics and figures. By employing this style of study, which is rigorous and scientific, discoveries may be replicated.

Quantitative research strategy is characterised by its rigorous and scientific nature due to its emphasis on measurable data, statistical analysis, and systematic methodologies. This approach allows for controlled experimentation and objective measurement, enhancing the reliability and validity of findings, which in turn increases the likelihood that other researchers can replicate the study's conditions and methods to achieve consistent results.

Quantitative research is organised using this scientific technique. Following observation of the circumstance under inquiry, a hypothesis was formed using deductive reasoning; it was expected how the data would look if the theory were correct. The assumption was either confirmed or refuted after the evidence was gathered and analysed. Correlational analysis was used in this study to analyse the data.

The concepts, beliefs and ideals supporting a particular research approach are all part of the methodology, a set of rules and procedures by which a given study is carried out (Mackenzie & Knipe, 2006). Research methodology can also be defined as the methods, tactics, and procedures utilised to carry out a research plan and the guiding concepts and presumptions that guide its application and execution (Terre Blanche, 2006). The overall research strategy that is based on a paradigm or theoretical framework is referred to as methodology. By contrast, the organised processes, practices, or tools used in data collection and analysis are called "methods". The research procedure, the instruments, and the methods are critical areas of attention for research methodology (Babbie, 2016).

This research used a questionnaire. This study used cross-sectional questionnaires to infer the characteristics of a large population of interest based on a subset of that population, specifically managers/leaders in South Africa. Each study has a certain number of limitations. Limitations are uncontrolled shortcomings or influences resulting from the researcher's restrictions. In addition, certain restrictions were applied to the scope of the study. The term "delimitations" is commonly

used to refer to them. Kroll (1972) described delimitations as the investigator's choice of a practical study topic, such as using a single personality test to evaluate personality characteristics.

Each research strategy is separated into two fundamental stages: planning and execution. A study requires a set of essential assumptions as a starting point. Therefore, they postulate the existence of specific circumstances and the ability to witness and quantify the behaviours. Quantitative research's fundamental purpose is to quantify the data. It permits generalisations of the results by examining the views and reactions of the sample population that can then be extrapolated to the whole population.

Quantitative research outcomes are constrained: In quantitative analysis, standardised questionnaires with closed-ended questions are used. As a result, the findings are not necessarily accurate representations of what occurred. Additionally, respondents' response options are limited by the researcher's decision. Consequently, the study proposal specifies the restricted outcomes. This study is meticulously designed to guarantee proper randomisation and the identification of appropriate control groups. To accurately reflect the intended population, a high response rate is essential. Thus, quantitative methods are used to elicit detailed replies to a query.

As illustrated in Figure 4.1, this study explored the IP as an individual experience of thinking that one is not as qualified as others believe one to be (naturalistic research); it also examined the structure of this phenomenon in the business world as leadership praxis in a physical condition (inductive study). Finally, this analysis considered the effect on the effectiveness of leadership qualities (holistic research). This illustration also represents the reasoning concepts and research approaches related to the visual construct of this study. Due to the quantitative nature of this study, a range of unique styles of reasoning is required. Three distinct modes of reasoning are proposed to illustrate the pluralistic nature of this research: inductive, deductive and abductive reasoning.

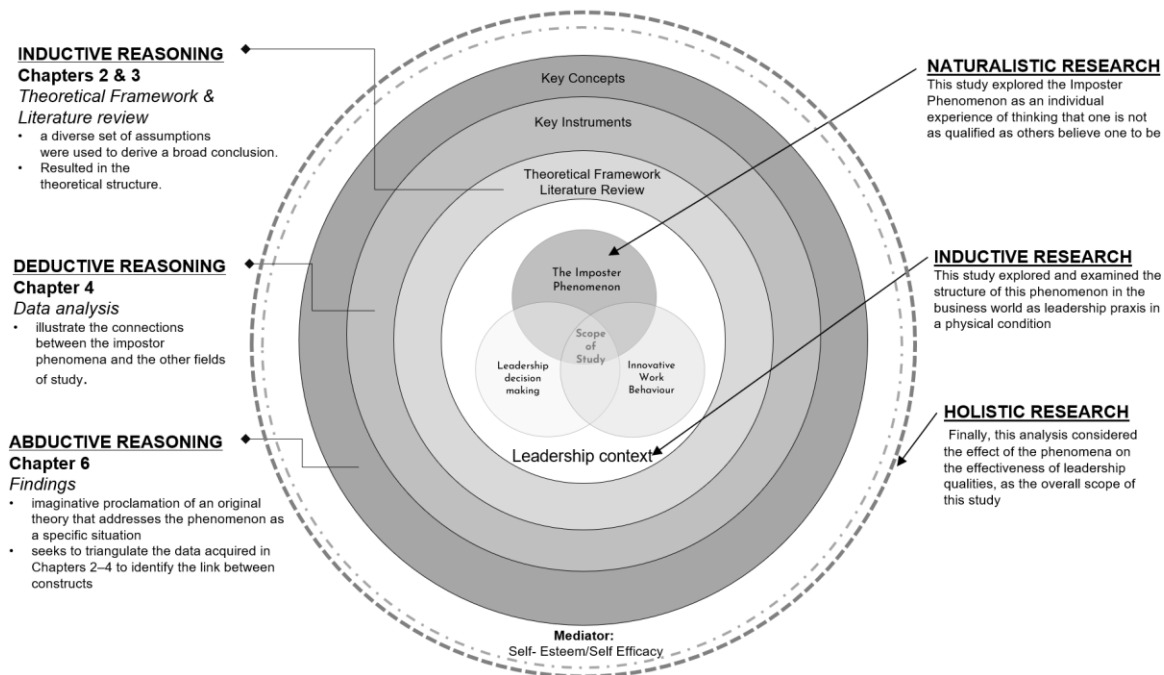


Figure 4.1: Visual Representation of the Reasoning and Research Levels within the Research Construct

Source (Researcher's own)

Hughes and Lavery (2015) characterise inductive reasoning as progressing from an exact particular to the whole, demonstrating the approach as forming inferences and suppositions based on observation. As a result, various assumptions derive a broad conclusion. Inductive reasoning was used as a logic analysis tool in Chapters 2-3, which developed the theoretical structure. This chapter discusses the IP concerning leadership competencies: IWB and decision-making. The role of self-esteem as a mediating element in the relationship between the research constructs was investigated.

In contrast to inductive reasoning, Berg and Latin (2008) define deductive reasoning as the method that progresses from a broad perspective to clear particulars. Hughes and Lavery (2015) suggest that deductive reasoning leads to the desired conclusion when facts or hypotheses are used. Blank (1984) further argues that reasoning primarily establishes the necessary and sufficient conditions for explaining a phenomenon. Scientific thinking also entails investigating facts, relationships among things and the makeup of these items. Humans can carefully discover the existence of entities and their relationships or expand that knowledge to learn about new spheres (Misra, 1989).

Abductive reasoning is defined as the application of recognised interpretive theory. It is also defined as detecting unusual conditions considering an established interpretive approach. According to Alvesson and Kärreman (2007), abductive reasoning refers to a situation where logical thinking functions in a way that is different from what one would expect, leading to advancements within a reliable framework or model that gives meaning to the unexpected situation. Abductive reasoning involves proposing a novel approach to address an unexpected problem (Alvesson & Kärreman, 2007). Abduction occurs when there is no adequate explanation in the current body of knowledge; such construction or uncovering is based on a cognitive appraisal of accumulated data (Dixon *et al.*, 2010).

Adaptive reasoning serves as a crucial tool in research by facilitating the exploration of how various constructs interconnect. By engaging in adaptive reasoning, researchers can discern the intricate relationships between different variables, constructs, and concepts. This aids in uncovering the underlying mechanisms that link these elements, offering insights into the intricate dynamics shaping a phenomenon. Adaptive reasoning enables researchers to identify patterns, causal links, and dependencies among constructs, enhancing their ability to construct comprehensive models that accurately represent complex interactions. Ultimately, adaptive reasoning empowers researchers to navigate the complexities of data analysis, theoretical frameworks, and empirical findings, enabling them to construct a more coherent and holistic understanding of how different constructs are interwoven within the research context.

Chapter 5 employs deductive reasoning to illustrate the connections between the IP and the constructs included in this study. Adaptive reasoning serves as a crucial tool in research by facilitating the exploration of how various constructs interconnect. By engaging in adaptive reasoning, researchers can discern the intricate relationships between different variables, constructs, and concepts. This aids in uncovering the underlying mechanisms that link these elements, offering insights into the intricate dynamics shaping a phenomenon. Adaptive reasoning enables researchers to identify patterns, causal links, and dependencies among constructs, enhancing their ability to construct comprehensive models that accurately represent complex interactions. Ultimately, adaptive reasoning empowers researchers to navigate the complexities of data analysis, theoretical frameworks, and empirical findings, enabling them to construct a more coherent and holistic understanding of how different constructs are interwoven within the research context.

Chapter 6 contains the conclusions delivered from Chapter 5. These findings incorporate the notions that lead to abductive reasoning in this research. Similarly, Chapter 5 triangulated the assumptions acquired in Chapters 2 – 4 to identify the link between the IP, self-esteem, leadership abilities associated with innovative behaviour, and decision-making self-efficacy. The next section discusses the measuring instruments used in this study.

4.5 MEASURING INSTRUMENTS

Operational definitions and essential concepts will transform abstract ideas into observable and quantifiable metrics to collect data. By tying the IP and these concepts together, this study may analyse and assess the effect of the IP on leaders in South Africa. A quantitative cross-sectional questionnaire was used in this study to examine the relationship between the chosen components. The questionnaires were based on the work of Ibrahim *et al.* (2020), Rosenberg (1965), Myburgh *et al.* (2015) and Ayoub *et al.* (2021).

4.5.1 Impostor-Profile (IPP31)

This questionnaire establishes if a leader is experiencing characteristics of the Impostor Phenomenon using the German-developed Impostor-Profile (IPP31). The German-developed Impostor-Profile (IPP31) is a frequently used instrument for assessing individuals' self-perceptions of intellectual and professional impostor behaviour (presented as Section C of the questionnaire). The impostor-profile (IPP31) questionnaire developed by Ibrahim, Münscher and Herzberg (2020) was used to measure the IP. The scale comprises six factors and 31 items: Competence Doubt, Working Style, Alienation, Other-Self Divergence, Frugality and Need for Sympathy. In addition, a Likert scale where: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree, and (5) Strongly agree was used.

There are six scales and 31 components in the impostor profile. With a response range of 1 ("does not apply in any aspect") to 100 ("applies entirely"), the instrument utilises a visual analogue scale. The sub-scale expression is depicted in Table 4.2 below.

Table 4.2: The Sub-Scale Expression Impostor-Profile (IPP31)

SCALE	FACTOR	ITEMS
<i>Total score</i>		<i>31 items</i>
1- CD	Competence Doubt (11 items)	4, 5, 10, 13, 14, 18, 21, 23, 26, 30
2- WS	Working Style (7 items)	2, 6, 11, 17, 24, 29
3- AL	Alienation (3 items)	22, 25, 28
4- SD	Other-Self Divergence (4 items)	3, 7, 20, 27
5-AM	Ambition (3 items)	8, 15, 19
6-ND	Need for Sympathy (3 items)	9,12,16

4.5.2 Rosenberg Self-esteem Scale

Self-esteem was measured by the scale developed by Rosenberg (1965). The scale consists of 10 items and a 4-point Likert scale ranging from (1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree. The Rosenberg Self-Esteem Scale determined the individual's degree of esteem (as Section D of the questionnaire). Global self-esteem is the main emphasis of this 10-item self-assessment. It comprises 10 claims concerning a person's general sense of value or acceptability. The responses were rated from strongly agree to disagree on a four-point scale.

The RSE is a Guttman scale; hence a system of combined ratings is used for scoring. The responses for low self-esteem are "strongly disagree" or "agree" on questions 2, 5, 6, 8, and 9, and "strongly disagree" or "agree" on things 1, 3, 4 and 7. Items 3, 7 and 9 are scored as one is provided with two or three correct answers. Things 1, 8 and 10 are scored as separate items, while combined correct replies (one or two out of two) to items 2 and 6 are considered a single item for items 4 and 5. Items 1, 8 and 10 are scored as individual items. After reversing the scores for the items with negative wording, the scale may be scored by adding up each item's four points (Rosenberg, 1979).

4.5.3 MDMSE Questionnaire

Thirdly, using the MDMSE Questionnaire (MDMSEQ), as described in Section E of the questionnaire, the self-efficacy of a leader in making managerial choices was evaluated. This study assessed managers' confidence in their ability to make decisions. When completing the

MDMSEQ, subjective self-efficacy beliefs are compared to levels of decision-making capability on a 100-point scale. Nine components comprised the first activity, while twelve included the design phase, which comprised systematic data collecting and debate.

When completing the MDMSEQ, perceived self-efficacy beliefs are evaluated concerning levels of decision-making ability on a 100-point scale, ranging in 10-unit intervals from 0 (“Cannot do”) to total assurance of 100 (“Highly certain can do”). Each question was constructed to reflect on the behaviours that managers have some influence over and their level of tenacity, exertion, accuracy, threat or self-discipline in carrying out these activities regularly in the face of adverse circumstances. The items measuring the same efficacy domain were combined to create a mean self-efficacy subscale score (Myburgh *et al.*, 2015). The sub-scale expression is illustrated in Table 4.3.

Table 4.3: The Sub-Scale Expression MDMSE Questionnaire

SCALE	FACTOR	ITEMS
<i>Total score</i>		<i>30 items</i>
1- AIE	Analytical and Inferential Efficacy (4 items)	10, 11, 14, 22
2- ESPE	Exploratory Search and Processing Efficacy (8 items)	12, 13, 18, 19, 20, 21, 23, 27
3- SIE	Social Influence Efficacy (6 items)	24, 25, 26, 28, 29, 30
4- TACE	Thought and Affected Control (12 items)	1, 2, 3, 4, 5, 6, 7, 8, 9, 15, 16, 17

4.5.4 Innovative Work Behaviour Scale

Lastly, leaders’ IWB was assessed using Ayoub *et al.*’s Innovative Work Behaviour Scale. This scale aims to elicit multidimensional measurements of an individual’s innovative behaviour. The questionnaire investigated the following aspects: opportunity exploration, idea generation, idea promotion, idea realisation and idea sustainability (presented as Section F of the questionnaire). The sub-scale expression is as follows (Ayoub *et al.*, 2021):

Table 4.4: The Sub-Scale Expression of the Innovative Work Behaviour Questionnaire

SCALE	FACTOR	ITEMS
<i>Total score</i>		<i>27 items</i>
1- EXP	Opportunity Exploration (4 items)	1, 2, 3, 4
2- GEN	Idea Generation (5 items)	5, 6, 7, 8, 9
3- PROM	Idea Promotion (6 items)	10, 11, 12, 13, 14, 15
4- REAL	Idea Realisation (7 items)	16, 17, 18, 19, 20, 21, 22
5- SUS	Idea Sustainability (5 items)	23, 24, 25, 26, 27

Once the data were collected and analysed, the following were determined: In Section C, data were analysed to determine if the respondent could be classified as a leader who experiences IP characteristics. In Section D, data analysis was done to ascertain the respondent's self-esteem. The data analysis determined the respondent's management decision-making characteristics in Section E. Section F was conducted to verify the respondent leader's IWB. In the next section, the reliability and validity of these measuring instruments are presented.

4.6 RELIABILITY AND VALIDITY OF THE MEASURING INSTRUMENTS

Terre Blanche (2006) defines validity as the capacity of research to establish incontrovertible deductions and draw compelling, accurate, logical and authentic inferences. Reliability is described as the ability of study findings to be repeated. Compared to positivists, who believe they are probing a secure, unchanging reality where reliability is a highly valued criterion, constructionist and interpretive researchers perceive the context they study as volatile and complex (Terre Blanche, 2006)

Validity concerns include low data tables for analysis or invalid comparisons (Creswell & Plano Clark, 2017). Each questionnaire used in this research was validated in previous research; therefore, these questionnaires can be seen as reliable instruments for measuring the IP, decision-making self-efficacy and IWB.

The reliability of a measuring instrument is measured by its ability to generate, repeat and statistical estimates of a valid underlying score. It is the consistency of a metric or method that is quantified. Ability is a term that relates to an assessment tool's capacity to produce consistent and reliable outcomes. Each statistic or technique was reviewed for reliability, such as approaches for detecting usability concerns in an interface and expert opinion.

“Inter-rater reliability, test-retest reliability, parallel form reliability, and internal consistency reliability” are the four most often used approaches for measuring the reliability of any empirical methodology or statistic. “Cronbach’s alpha” (α) is a statistic that reveals an object’s internal consistency or the strength of its connections. It is used as a stand-in for the scale’s reliability.

Cronbach’s alpha, or α , is a measure of reliability. A ratio indicates how much-observed score volatility is attributable to actual score variance. The reliability of a test is determined by three factors: accurate scores, observed scores and measurement error. Cronbach’s alpha is a statistic that signifies the internal consistency of a collection of objects or the degree to which they are connected. It is regarded as a proxy for the reliability of the scale. A “high” α does not always imply that the measure is one-dimensional. Additional analyses can be undertaken to verify the scale’s uni-dimensionality and internal consistency. Exploratory factor analysis is a method for assessing a dataset’s degree of dimensionality. Cronbach’s alpha is not a statistic but a reliability indicator. The total number of test items and their average intercorrelation can compute α .

$$\alpha = \frac{N\bar{c}}{\bar{v} + (N - 1)\bar{c}}$$

The inter-rater reliability technique was applied in this investigation. Inter-rater reliability is a metric used to assess the consistency of findings across various judges or raters. Reliability is measured by how consistently raters or observers respond to a particular phenomenon. Inter-rater reliability is crucial since human observers do not always view responses similarly. Raters may differ on how specific comments or materials show comprehension of the assessed constructor skill. When assessments are thought to be subjective, inter-rater reliability is incredibly beneficial.

Cronbach’s alpha is the most often utilised reliability metric in applied contexts. It is widely used since it just takes a single sample of data to assess internal consistency reliability. It assesses participants’ consistency in responding to a single set of items. It is considered to be a weighted average of the correlations between objects. Cronbach’s alpha values vary between 0.0 and 1.0. Since the late 1960s, 0.70 has been considered the minimum acceptable level of dependability, but, in practice, for high-stakes questionnaires, strive for better than 0.90.

The greater the number of questions in an instrument, the more internally consistent it is; the increased number of items in a questionnaire increases its internal consistency and reliability. On the other hand, internal reliability generally suffers because of the frequently urgent requirement

for a limited number of objects. When fewer items and a lower degree of internal reliability, a larger sample size helps compensate for the loss of reliability.

This study's validity was improved in the following ways: The objectives are clearly stated and operationalised. The study's objectives are well-defined and reflected in the research questions. The questions align the assessment measure with the study's objectives and goals. In research, determining validity and reliability ensures that the data are accurate, replicable and dependable and that the conclusions are sound. Validity and dependability are necessary to ensure the instrument's authenticity and calibre. The α 's that the original developers found for each of the instrument's factors are explained as follows:

German-developed Impostor-Profile (IPP31): "The Impostor Phenomenon is a personality trait characterised by perceptions of inauthenticity combined with the dread of failing and fear of being revealed as a phoney. This instrument is constructed theoretically. The following measures were developed theoretically to assess the main element characteristics: Competence Doubt, Working Style, Alienation, Other-Self Divergence, Ambition and Need for Sympathy. Exploratory and confirmatory factor analyses on a German sample selected 30 items. The six measures have good internal consistency values ranging from 0.69 to 0.92. Initial concept validity examinations revealed positive relationships with both convergent (Neuroticism) and discriminant measures (Self-Esteem) (Ibrahim *et al.*, 2020).

Rosenberg self-esteem scale (RSE): "The RSE scale measures self-esteem and has ten items. The RSE is a Guttman scale; hence aggregated ratings are used to determine the score. "Strongly disagree" or "disagree" with items "1, 3, 4, 7, and 10", and "agree" or "strongly agree" with items 2, 5, 6 and 8. Two or three accurate answers are worth one point for problems 3, 7 and 9. Items 4 and 5 are scored as a single item if one or both correct answers are provided out of two; items 1, 8, and 10 are scored separately if one or both correct answers are provided out of two; and items 2 and 6 are scored as a single item if one or both correct answers are provided out of two.

Additionally, the scale can be scored by adding the four-point items after reversing the negative-worded items. The RSE's repeatability value of 0.92 on the Guttman scale suggests high internal consistency. The measure was established in the 1960s using a sample of 5 024 high school juniors and seniors from ten randomly chosen schools in New York State. The sample was assessed using the Guttman scale. Over two weeks, test-retest reliability revealed correlations of 0.85 and 0.88, showing outstanding stability. The scale is highly reliable: test-retest correlations

are generally between 0.82 and 0.88, while α values for distinct samples range between 0.77 and 0.88 (Rosenberg, 1965).

MDMSE Questionnaire (MDMSEQ): The dependability of the 30-item scale was also examined, and internal reliability of 0.87 was reported. The complete-scale reliability was positive and comparable to the alpha coefficient of 0.89 published for another South African domain-specific self-efficacy beliefs measure, the Entrepreneurial Self-Efficacy Scale (Urban, 2006), intercorrelations and internal consistency MDMSEQ sub-scales with magnitudes ranging from 0.59 to 0.76. All zero-order coefficients surpassed the Kline-recommended minimum of 0.30 (Kline, 2015).

“The coefficients of internal consistency indices (α) indicated that the Affect Control sub-scale had a reliability estimate of 0.90. Alpha values for the Analytical and Inferential Efficacy sub-scale were 0.92, and for the Social Influence, the Efficacy sub-scale was 0.85. The lowest alpha of 0.80 was found on the five-item Thought Control Efficacy sub-scale. Internal consistency across sub-scales was relatively strong, above the 0.70 standards advised by Nunnally and Bernstein (Nunnally, 1994). Additionally, Hair considers an alpha of 0.60 appropriate in research using new metrics” (Hair *et al.*, 2006).

Innovative Work Behaviour Questionnaire: The Innovative Work Behaviour Scale assesses the leader’s IWB (Ayoub *et al.*, 2021; De Jong & Den Hartog, 2010). This questionnaire aims to elicit several dimensions of an individual’s innovative behaviour. The questionnaire probed five areas: Opportunity Exploration, idea generation, Idea Promotion, Idea Realisation and Idea Sustainability. For this initial scale, α was 0.87 (Ayoub *et al.*, 2021).

The population and sample for this study are discussed in the next section.

4.7 POPULATION AND SAMPLE

A study’s population is a group of individuals who share certain traits or experiences to determine the study’s questions and hypotheses (Kothari, 2004). Within the confines of this study, these units can exhibit a wide range of qualities, experiences, behaviours, attributes and situations. Maximum diversity sampling is based on viewing this research from all angles would help one comprehend it better. Maximum diversity sampling is a research approach that centres on the idea that obtaining a wide range of perspectives and viewpoints enhances one’s understanding of the subject under investigation. In this method, researchers intentionally seek out participants

or sources of information that represent various dimensions, characteristics, or viewpoints relevant to the research topic. By including diverse perspectives, such as different demographic groups, professional backgrounds, or cultural contexts, researchers aim to capture a comprehensive and nuanced understanding of the phenomenon they are studying. This approach assumes that a holistic view achieved through the inclusion of various angles and dimensions leads to more accurate and insightful insights, contributing to a richer and more complete comprehension of the research subject. This assists the study in finding common themes that emerge throughout the sample. The next section describes the target population and sample of this study.

4.7.1 Target Population

A population is a set of individuals included in research to help formulate its questions and hypotheses (Kothari, 2004). The statistical population provides data from individuals to achieve specific findings that support a study's hypothesis, namely that the IP is more likely to impact those who are more conscientious, have success-oriented, perfectionistic objectives and work in highly competitive and demanding professions. Environments with ambiguous performance standards, variable levels of support, and intense competition for profit may unintentionally foster impostor traits like self-doubt and dishonesty (Seritan & Mehta, 2016). For this reason, the study's target population consisted of managers/ leaders from both the private and the public sectors within South Africa.

4.7.2 Sampling Method and Size

Since the study uses a quantitative research methodology, a non-probability convenience sampling technique was used to establish a sample and extrapolate its features to the population of interest. In quantitative research, convenience sampling is a non-probability sampling strategy. It entails choosing volunteers convenient for the researcher, thus the name "convenience." This selection technique is practical and time-effective since participants are selected based on their convenience or closeness to the researcher.

The questionnaire has been distributed to all alumni of North-West University via gatekeeper, inviting individuals in managerial positions to participate in this study. This database comprised around seven thousand potential participants, including alumni from managerial and non-managerial backgrounds. A total of 616 managers completed the questionnaire. Only the responses from managers were included in the final data set.

A sample size of 616 responses is considered sufficient, as it meets the requirements for statistical significance and power. Power refers to the probability of detecting a true effect if it exists. If the effect size is large and the variability within the sample is relatively low, a smaller sample size might suffice. However, if the effect size is small or the variability is high, a larger sample might be necessary to achieve meaningful results.

If a researcher seeks authorisation to engage the North-West University (NWU) as a locus for their research investigation, encompassing its academic personnel or students as subjects, or endeavours to procure access to research-relevant data preserved within NWU's purview, a procedurally prescribed course of action is requisite. These solicitations fall within the ambit of scrutiny conducted by the Research Data Gatekeeper Committee (RDGC), operating under the aegis of the registrar, as part of the established protocol.

Convenience sampling has several advantages that, in some circumstances, make it desirable. The following are some benefits of convenience sampling: Researchers may rapidly and easily collect data from people who are easily accessible or readily available by using convenience sampling. This strategy is beneficial when logistical, time, or budget limitations make it challenging to identify respondents using more precise sampling procedures. Convenience sampling may be more cost-effective than random sampling approaches since it uses fewer resources overall.

Convenience sampling allowed data to be efficiently collected in this study. Convenience sampling because a particular population or environment was the study's focus. Convenience sampling is useful, for instance, if the study's goal is to comprehend the viewpoints of a certain set of individuals, such as in this study, managers/leaders.

According to the theoretical viewpoint, samples are taken from a population with less variation than the target population. For instance, samples are taken from places where $N(\mu, \frac{\sigma^2}{a})$ $a > 1$ if the target population is $N(\mu, \sigma^2)$. This gives the values in the distribution's tails a negligible likelihood of inclusion, leading to a random selection. On the other hand, practical implementation involves removing the tail values from the target population (Guarte & Barrios, 2006).

This research approach produced objective facts successfully communicated via statistics and figures. By employing this approach, which is rigorous and scientific, findings could be replicated. The study established averages and trends linked to the IP, IWB and decision-making self-efficacy competencies. The conclusions reached in the data analysis process were used to forecast and investigate relationships between the constructs.

Quantitative research is organised using this scientific technique. Following observation of the circumstance under inquiry, a hypothesis was formed using deductive reasoning; it anticipated how the data would look if the theory were correct. The assumption was either confirmed or refuted after the evidence was gathered and analysed. Correlational analysis was used in this study to analyse the data. In this study, correlational analysis was used. This approach is used to study the relationships between research variables quantified and documented. The factors in this study were related, particularly the IP and leaders' decision-making and IWBs. This technique was used to identify patterns and trends in data.

4.7.3 NWU Gatekeeper

A gatekeeper within the context of research at North-West University (NWU) refers to a procedural mechanism put in place when a researcher seeks permission to involve NWU's academic personnel or students as subjects in their research study, or when they aim to access research-related data held by NWU. This mechanism entails a prescribed course of action that involves a review process overseen by the Research Data Gatekeeper Committee (RDGC). The RDGC operates under the supervision of the registrar and operates as an established protocol to ensure that requests for engagement with NWU's resources are thoroughly examined and aligned with ethical and institutional standards.

As the questionnaire of this study was distributed to the NWU alumni, permission to do so was obtained from the NWU research gatekeeper (NWU-GK-22-055). This consent letter can be viewed in Annexure D. As per the Terms of Reference, this study followed the commitment made to the NWU research gatekeeper. The relationship between the researcher and the NWU group of samples was also protected by written consent from the Gatekeeper of the NWU. The gatekeeper assesses all requests for research data that call for access to data at NWU and employees and students at NWU per the POPI Act (No. 4/2013). The gatekeeper makes sure that, in cases like this study, where NWU stakeholders are asked to participate in research projects as research subjects, those subjects are recruited openly and voluntarily; that a transparent and objective process is followed in obtaining data from such individuals; and that any identifiable personal information is obtained from those subjects with full informed consent and not from any other sources or databases.

The researcher was fully aware of potential reputational risks to the NWU. The questions of this study's questionnaire applied to the study objectives and were clearly stated; the questionnaire does not pose a reputational risk to the NWU. Findings in this study will also be presented in

generalised terms. Data were processed anonymously and protected by the university's ethical guidelines and the POPI Act. In the next section, the measuring instruments used in this are discussed.

4.8 PROCEDURES FOR DATA COLLECTION

Questionnaires were used to produce a substantial amount of data rapidly and affordably. Data were collected via an anonymous quantitative questionnaire; no direct contact with the respondents was made. This method assisted the study in generating data from real-world observations and, thus, allowed the respondents to respond anonymously to their experiences related to this study.

The researcher was responsible for gathering, storing, protecting and using the data. The data was acquired via an online portal (Google Forms). A backup copy of the material was made on the researcher's laptop and kept on the researcher's Google Cloud storage account. The gatekeeper from NWU provided permission to access possible respondents who are alumni of NWU. The researcher requested that the gatekeeper send invitations, which included the link to the online questionnaire, to the alumni of NWU. Once the data collection period had passed, the raw data of completed questionnaires were downloaded from the Google Forms server. The raw data was downloaded in Excel format, and the Statistical Package for Social Sciences (SPSS) software was used to import the final raw data for analysis. In the next section, the process of data analysis is presented.

4.8.1 The Structure of the Questionnaire

Data were gathered by a quantitative, anonymous questionnaire (conducted using Google Forms); there was no direct interaction with the respondents. Transparency and an objective process were followed as this study adhered to the rules set out by the NWU Ethics Committee, the NWU gatekeeper and the POPI Law. The study supervisor, researcher and gatekeeper all distributed this questionnaire. The information used to identify prospective participants was as follows: Firstly, the scope of leadership included supervisors and middle and senior management. Secondly, leaders from both private and public sectors were included.

E-mail invitations were used to invite participants to take part in this study. A Google form was used to capture their responses to the questionnaire (the link was provided in the e-mail). The participant received all the study details, including understanding consent requirements and

ethical validity. Participants in this procedure could opt out of the questionnaire should they wish to do so.

Data were collected via an anonymous questionnaire; no direct contact with the respondents was conducted. This method assisted the study in generating data from real-world observations and thus empirical data, allowing the respondents to respond anonymously to their experiences related to this study. This sample type's data collection included many individuals, which made it more likely than other sampling techniques to provide data from a representative sample.

The primary constructs of this study are the IP, self-esteem, decision-making self-efficacy and IWB. Each construct was evaluated using existing questionnaires developed by reputable scholars. Previous studies confirm this questionnaire's validity and reliability. Written consent to use their questionnaires within this study was obtained from the authors. This consent can be viewed in Annexure A.

This approach offers notable advantages by capitalising on the validated instruments that have undergone rigorous testing and refinement in prior studies. By leveraging established questionnaires, the researcher ensures the reliability and validity of data collection, as these instruments have demonstrated their ability to measure the intended constructs accurately. Moreover, using established questionnaires allows for comparability with existing research, facilitating a more comprehensive understanding of the phenomenon across different contexts and populations. This strategy streamlines the research process, minimises potential errors in questionnaire design, and enhances the study's credibility by aligning with established methodologies in the field. Please refer to section 4.5, Measuring instruments for details of the instruments used.

Section A collected the consent of the respondent. This section confirmed the consent to voluntary participation. It confirmed that this study supported anonymity, informed consent, confidentiality, communication of the results and the potential for harm. The South African Protection of Personal Information (POPI) Act 4 of 2013 protected the information collected. This research was compliant with the North-West University (NWU) Ethical Committee and POPI Act guidelines. This consent can be viewed in Annexure B.

Section B collected the biographical information of the respondent. This information used profiling of the sample set for statistical purposes only. Information collection included the following: Gender (male, female or other), Age (20-29, 30-39, 40-49, 50-59, and 60 and over) and highest qualification (NQF level 4 (National Senior Certificate (NSC) / Senior Certificate, NQF Level 5

(Higher Certificate), NQF Level 6 (National Diploma or an Advance Certificate), NQF level 7 (Bachelor's Degree or Advanced Diploma), NQF Level 8 (Honours Degree), NQF Level 9 (Master's Degree) and NQF Level 10 (Doctoral Degree)).

Also included were questions on the respondents' leadership roles (supervisory, middle management, and senior management) as well as confirmation of the following: If the respondents had leadership experience (yes or no); the number of years of leadership experience "(1 – 5 years, 6 – 10 years, 11 – 15 years, 16 – 20 years, 21- 25 years, 26 - 30 years or 30 years and more) and in which sector the respondent was employed (public or private sector).

Section C determined the levels of the IP's influence using the German-developed Impostor-Profile (IPP31). This scale measured the following: "Competence Doubt, Working Style, Alienation, Other-Self Divergence, Frugality, and the Need for Sympathy". This section determined the levels of impostor tendencies among respondents. Using the Rosenberg self-esteem scale, Section D measured self-esteem (RSE). This self-report scale measures the overall self-esteem of the respondents. Section E assessed the Managerial Decision-Making Self-Efficacy (MDMSEQ) using the Management Decision-making Self-Efficacy Questionnaire. This questionnaire evaluated the decision-making process from several viewpoints. With data collected in this section, comparisons were made between a leader's decision-making traits.

In the last section, Section F, the levels of IWB were measured using the Innovative Work Behaviour Scale designed by Ayoub *et al.* (2021). The following areas: "Opportunity Exploration, idea generation, Idea Promotion, Idea Realisation and Idea Sustainability ", were examined by this questionnaire. This questionnaire can be viewed in Annexure C.

4.9 DATA ANALYSIS

The statistical software package SPSS was used to analyse the acquired quantitative data. SPSS is the most extensively used quantitative analysis application in social science. The study's questions were answered by statistical analysis following data collection and processing. The study's goals, research questions and acceptance or rejection of the hypotheses were met through descriptive statistics and structural equation modelling. Averages and measures of variability were included in descriptive statistics, which summarised the data. This research used graphs, scatter plots and frequency tables to visualise patterns or outliers.

Analysing quantitative information is interactive and dynamic (Polit & Beck, 2010). Data analysis requires organising, giving structure and extracting meaning from data. Data analysis happens

simultaneously with data collection, defining the mental processes involved in data analysis (Holloway & Wheeler, 2002). After gaining comprehension, the researcher can thoroughly explain the topic under examination, thus referring to the perceiving phase of the data analysis. When further data cannot be added, it means that the data collection process has reached a conclusion, and no additional observations or measurements can be obtained.

The act of synthesis involves sorting and compiling data. This aids the researcher's interpretation of the phenomenon's characteristics. This provides more insight into the phenomenon, and the analysis allows the researcher to develop generalisation. The final step in the data analysis phase is organisation. During this stage, the researcher could develop many theories to explain the phenomenon and assess the extent to which the constructs were correlated.

The following issues are typically addressed by organisational academics doing research: identifying the data kinds and sources that benefited the researcher in reaching the study objectives, determining the sequencing and integration to be optimised for eventual publication and impact, and indicating how the researcher can reduce the likelihood of inaccuracy and other rigour-impeding factors. Moreover, it guarantees that energy and money invested in this research and development improve science and society.

To gain a thorough understanding of the current use of quantitative methods in organisational research, including novel techniques for conducting such research, various types of quantitative value methods, and beneficial strategies for boosting this value, the researcher gathered and analysed quantitative data to address these questions (Gibson, 2016). The data were analysed using statistical techniques to accomplish the research objectives and answer the study's research questions. Table 4.5 summarises each research question following the data analytical method used to answer the question. A brief description of each method will follow after the table.

Table 4.5: Data analysis methods used in this study

OBJECTIVE:	METHODS USED IN THIS STUDY
Objective 1 The IP, self-esteem, decision-making self-efficacy and IWB levels of managers.	- Descriptive statistics
Objective 2 The IP, self-esteem, decision-making self-efficacy and IWB measuring instruments validity and reliability in the South African context.	<u>Reliability</u> - Cronbach Alpha Coefficients (α) <u>Validity</u> A Confirmatory factor analysis was performed on instruments with the following fit indices: - Comparative fit index - Chi-square value/ degrees of freedom - RMSEA is the root mean square error of approximation

OBJECTIVE:	METHODS USED IN THIS STUDY
	- Standardised (regression) coefficients - Percentage of Total Variance explained - Factor loadings - Exploratory Factor Analysis (EFA) - Bartlett's test of sphericity - Kaiser-Meyer-Olkin (KMO)
Objective 3 The differences in the mean scores of the IP, self-esteem, decision-making self-efficacy and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.	<u>For age, qualification, experience and role</u> - Nonparametric analyses - Spearman's rank correlation coefficients <u>For gender and sector</u> - Parametric analyses - T-tests - Cohen's d
Objective 4 If self-esteem mediates the relationship between the IP, decision-making self-efficacy and IWB.	- Structural Equation Modelling (SEM) - Correlational Coefficients - Standardised (regression) coefficients - Squared Multiple Correlations - Chi-square value/ degrees of freedom - RMSEA: Root Mean Square Error of Approximation - Comparative fit index
Objective 5 If there is a relationship between the IP, self-decision-making efficacy and innovative work behaviour of managers in South Africa.	- Structural Equation Modelling (SEM) - Correlational Coefficients - Standardised (regression) coefficients - Squared Multiple Correlations - Chi-square value/ degrees of freedom - RMSEA: Root Mean Square Error of Approximation - Comparative fit index

4.9.1 Bartlett's Test of Sphericity

Bartlett's test of sphericity is a statistical test used to determine whether a set of variables in a dataset are correlated or not. It is commonly used in factor analysis, assessing whether the correlation matrix among the variables is suitable for factor analysis. The test calculates the difference between the observed correlation matrix and the identity matrix (a matrix with 1's on the diagonal and 0's elsewhere) and determines whether this difference is statistically significant. If the test statistic is large and the p-value is small, this indicates that the observed correlation matrix is significantly different from the identity matrix, and the data may not be suitable for factor analysis. On the other hand, if the test statistic is small and the p-value is large, this suggests that the observed correlation matrix is not significantly different from the identity matrix, and the data may be suitable for factor analysis (Bartlett, 1950).

In this study, Bartlett's test of sphericity was used to determine whether a set of variables in a dataset, specifically the self-esteem data set, correlated and if the differences in the test were statistically significant. This influenced the outcome of the second research objective, the IP, self-

esteem, decision-making self-efficacy and IWB measuring instruments' validity and reliability in the South African context.

4.9.2 Chi-Square Value/ Degrees of Freedom

The chi-square χ^2 value, or CMIN, determines whether a difference between the measured variables and the anticipated outcomes is statistically significant. CMIN shows whether the sample data and hypothetical model suit the study well. Because the χ^2 test is viewed by some as an overly strict indicator of model fit, given its power to detect even trivial deviations from the proposed model (Hancock *et al.*, 2010), Mueller suggested that the χ^2 test statistic be divided by degrees of freedom (Mueller, 1999). The model yielded a Minimum Sample Discrepancy divided by Degrees of Freedom (CMIN/DF) value of 4.463. Interpretation of the size of this value depends to a large extent on the viewpoint of the investigator. However, in practice, some interpret ratios as high as 3.4, or even five, as representing a good model fit (Mueller, 1999). It is, however, considered good practice to report multiple fit indices, typically from three broad classes (Hancock *et al.*, 2010). Mueller described values above 0.9 as indicative of a good overall fit for a Comparative Fit Index. A relatively acceptable Comparative Fit Index (CFI) of .87 was found for the model, while a Root Mean Square Error of Approximation (RMSEA) value of .09 with a 90% confidence interval of [0.08; 0.10] was obtained (Mueller, 1999).

In this study, the χ^2 value or CMIN, was used to determine whether a difference between the measured variables and the anticipated outcomes was statistically significant. This influenced the outcome of the second, fourth and fifth research objectives. These objectives are Objective 2: The IP, self-esteem, decision-making self-efficacy and IWB measuring instruments' validity and reliability in the South African context; Objective 4: If self-esteem mediates the relationship between the IP, decision-making self-efficacy and IWB; and Objective 5: If there is a relationship between the IP, self-decision-making efficacy and IWB of managers in South Africa.

4.9.3 Cohen's D

Cohen's d is a statistical measure used to determine the standardised difference between two means. It is commonly used in social sciences, psychology, and other fields to compare the effect size of a given intervention or treatment across different groups or conditions. Cohen's d is calculated by dividing the difference between the means of the two groups by their pooled standard deviation. A large Cohen's d value (typically, $d > 0.8$) indicates a substantial difference between the two means, while a small Cohen's d value (typically, $d < 0.2$) suggests a minimal

difference. The interpretation of Cohen's d values varies across disciplines, and researchers should consult domain-specific guidelines for their interpretation (Cohen, 1977).

This study used Cohen's d to determine the standardised difference between two means. This influenced the outcome of the third research objective: The differences in the mean scores of the IP, self-esteem, decision-making self-efficacy and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.

4.9.4 Comparative Fit Index

The CFI is a statistical measure used to evaluate the fit of an SEM to the data. It is commonly used in social sciences, psychology and other fields where SEM assesses the relationships among variables. The CFI is a goodness-of-fit index that compares the fit of the specified model to that of a baseline model, typically a null or independence model (Bentler, 1990). The CFI ranges from 0 to 1 (values greater than .90 imply a conservative fit, and .95 indicates a good fit). Values of .01, .05 and .08 indicate excellent, good and mediocre fit; some go up to 10 for mediocre. However, RMSEA models with values of .10 and larger should not be accepted (Blunch, 2008).

In this study, the CFI indicated whether the model fit was good or mediocre. This influenced the outcome of the second, fourth and fifth research objectives.

4.9.5 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a statistical technique used to test the fit of a hypothesised factor structure to a set of observed variables. It is commonly used in social sciences, psychology, and other fields where researchers seek to test theories or hypotheses about the underlying structure of latent constructs, such as intelligence, personality or attitudes. In CFA, the researcher specifies a model that defines the relationships among the observed variables and their underlying latent factors. The model is then tested against the observed data, and goodness-of-fit indices are used to evaluate how much the model fits the data. CFA can be used to test the adequacy of a single-factor model, a multi-factor model, or a higher-order factor model (Jöreskog, 1969).

This study used the CFI to determine a fit index for all instruments. These instruments indicated whether the model fit was good or mediocre for all instruments. This influenced the outcome of the second objective.

4.9.6 Correlational Coefficients

Correlational coefficients are statistical measures used to quantify the degree of association between two or more variables. Correlation coefficients can range from -1 to 1, with values closer to -1 indicating a strong negative association, values closer to 1 indicating a strong positive association, and values close to 0 indicating little or no association. The most used correlational coefficient is Pearson's correlation coefficient (r), which measures the linear relationship between two continuous variables. Other types of correlational coefficients include Spearman's rank-order correlation coefficient, which measures the association between two variables based on their ranks, and Kendall's tau, which measures the association between two variables based on the number of concordant and discordant pairs (Cohen *et al.*, 2013).

This study used correlation coefficients to quantify the degree of association between two or more variables. This influenced the outcome of the third, fourth and fifth research objectives.

4.9.7 Cronbach's Alpha Coefficients

As previously discussed in Section 4.6, α 's was computed to verify the reliability of the measuring instruments. Both exploratory and confirmatory factor analyses were used to determine the construct validity of the questionnaire. The reliability of the variables and measures measuring impostor tendencies, self-esteem, decision-making self-efficacy and IWB was evaluated using α . This study concentrates on α , which predicts dependability using data from a single test administration. However, alternative methods for measuring test score reliability have been offered. The most common use of the "internal consistency" coefficient α , is in organisational research (Cho & Kim, 2015).

The reliability of a total (or average) of q measures is shown by Cronbach's α reliability coefficient, where q measures may be reflective of "q raters, occasions, alternate forms, or questionnaire/test items" (Bonett & Wright, 2015). Each scale's reliability must be assessed using the internal consistency coefficient of Cronbach's α , with a cut-off value of 0.70. A high level of internal consistency is indicated by α values greater than or equal to 0.70. Above that, a scale is seen as nonsensical. It is essential to keep in mind that the scale used for each grouping may not have an impact on the composite scale. The CWE scale is excellent and consistent with a good α value. Given the substantial α value and the excellent outcome, the results warrant further investigation.

In this study, α coefficients were computed to verify the reliability of the measuring instruments. This influenced the outcome of the second research objective.

4.9.8 Descriptive Statistics

Descriptive statistics' main goal is to sensibly simplify massive volumes of data in any practical scientific investigation (Franzese & Iuliano, 2019). Descriptive statistics are the core attributes of data that let analysts assess its quality (Ruddle & Hall, 2019). Descriptive statistics' main objectives are understanding facts and clearly explaining and interpreting the data collected during an experiment (Franzese & Iuliano, 2019)

Descriptive statistics were computed to illustrate the demographic characteristics of the respondents and to measure the IP, self-esteem, decision-making self-efficacy and IWB levels. Descriptive statistics comprised frequency distributions, measures of central tendency and dispersion. Descriptive statistics provide simple descriptions of the sample and the observations. These summaries might be quantitative, like basic graphs or visual, like summary statistics. These summaries could be sufficient for a particular research project or the basis for the initial data description as part of a more in-depth statistical study.

Tables, graphs, means, and standard deviations were used to present descriptive data. A frequency table summarised the respondents' demographic information, including gender, age group, highest qualification, experience, managerial/leadership role and sector. The levels of reported impostor tendencies, self-esteem, decision-making self-efficacy and IWB among employees were calculated using the mean scores, standard deviations and response categories.

Since descriptive statistics may be displayed visually or textually in tables, they were used for this investigation. As the number of variables rises, the latter gets harder and harder to understand. Without making any assumptions about the underlying structure of the data, it offers statistical techniques and numerical and pictorial tools for clearly and appropriately summarising a data collection. The second stage entails processes for concluding a population from a sample of observations. Thus, by combining descriptive and inferential approaches, researchers may summarise results and test hypotheses (Ruddle & Hall, 2019). Descriptive statistical studies were also conducted to identify unique patterns to identify the mean, median, standard deviation, minimum and maximum scores and range of scores.

This study's descriptive statistics measured the IP, self-esteem, decision-making self-efficacy and IWB levels. These descriptive statistics comprised frequency distributions and dispersion. The

descriptive statistics of the demographic characteristics of the respondents are also presented. The fundamental characteristics of this dataset are described, illustrated and summarised using descriptive statistics, which provide details about this data sample and its measurements. These details made it easier to comprehend the data. This influenced the outcome of the first research objective.

4.9.9 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) is a statistical method used to identify the underlying factor structure of a set of observed variables. EFA is often used in social sciences, psychology, and other fields to identify the underlying dimensions of a construct or to reduce a large set of variables into a smaller number of factors. In EFA, the researcher first collects data on a set of variables and then examines the correlations between those variables. The researcher then uses a factor extraction method, such as principal component analysis or maximum likelihood estimation, to identify the underlying factors that best account for the variance in the observed variables. The researcher can then use factor rotation methods to identify a simpler and more interpretable factor structure.

The validity of the measuring devices was demonstrated using exploratory and confirmatory factor analyses. A multivariate statistical technique, EFA, has become essential for formulating, estimating and testing psychological hypotheses. A multivariate statistical method called EFA seeks to judiciously explain the covariation between several observed variables (Watkins, 2018). Additionally, EFA is used to model these interactions with a significant number of latent variables and to identify links between manifest variables. An assumption is made when a standard factor model creates a causal relationship between manifest indicators and latent variables (Goretzko *et al.*, 2021).

To identify driving factors, there are two methods. The principal component analysis (PCA) method produces minor components and considers the original variable's highest volatility. This procedure is used when the type of component is to be retrieved, and the standard error variance is uncertain. The theory first determines the number of extracted components. According to the view, the number of extracted features makes it reasonable. When deciding how many details to remove, the Eigenvalue criteria are used by most studies. The percentage value and variance explained techniques are also used for EFA. Based on the screen test requirements, we may choose certain variables. This method decides factors and plots the Eigenvalue on a graph (Reio Jr & Shuck, 2015). The questionnaires used in this study are reliable instruments used in prior

investigations on the IP, decision-making self-efficacy and IWB. The developers previously used all the questionnaires in this study in other studies. For a detailed explanation of the validity of the utilised questionnaires, please see Section 4.6.

Factor loadings are coefficients that quantify the strength and direction of the relationship between a latent factor and an observed variable in factor analysis. Factor loadings represent the extent to which each observed variable is associated with a particular latent factor. In EFA and CFA, factor loadings are used to identify the underlying factor structure of a set of observed variables. Factor loadings are typically expressed as standardised coefficients, with values ranging from -1 to 1. Factor loadings closer to 1 indicate a stronger relationship between the observed variable and the latent factor. Factor loadings can be used to interpret latent factors' meaning and identify which observed variables are most strongly associated with each factor. Researchers can also use factor loadings to assess the reliability and validity of psychological measures by examining the extent to which each observed variable is associated with its intended latent factor (Kline, 2023).

This study used EFA to identify the underlying factor structure of a set of observed variables, specifically the self-esteem data set factors. This influenced the outcome of the second research objective.

4.9.10 Kaiser-Meyer-Olkin (KMO)

The KMO measure is a statistic used to assess the suitability of data for factor analysis. The KMO measure is used to determine whether the variables in a dataset are sufficiently interrelated to justify the use of factor analysis. The KMO measure ranges from 0 to 1, with values closer to 1 indicating a more suitable dataset for factor analysis. A KMO value of less than 0.5 suggests that the variables in the dataset are not sufficiently related and that factor analysis is not appropriate. The KMO measure is based on the correlation matrix of the variables in the dataset and is calculated by comparing the observed correlations to the partial correlations, which control for the influence of other variables (Kaiser, 1974).

In this study, KMO was used to assess the suitability of data for factor analysis. This influenced the outcome of the second research objective.

4.9.11 Percentage of Total Variance Explained

Percentage of Total Variance explained (PTVE) is a statistic used to measure the proportion of the total variation in a set of variables that is explained by a factor or set of factors in factor analysis. In factor analysis, a set of observed variables are used to identify the underlying factors that account for the variation in those variables. The PTVE represents the proportion of the total variation in the observed variables that is explained by a particular factor or set of factors. PTVE is calculated by summing the squared factor loadings for each variable and dividing by the total sum of squared loadings for all variables. This produces a percentage, which represents the proportion of the total variance in the variables that is explained by the factor or set of factors (Kline, 2023).

In this study, PTVE was used to measure the proportion of the total variation in a set of variables that is explained by a factor or set of factors in factor analysis. This influenced the outcome of the second research objective.

4.9.12 RMSEA Is the Root Mean Square Error of Approximation

The Root Mean Square Error of Approximation (RMSEA) is a statistic used to assess the fit of an SEM. The RMSEA measures the discrepancy between the model and the observed covariance matrix, taking into account the complexity of the model and the number of parameters estimated. The RMSEA ranges from 0 to 1, with values closer to 0 indicating a better fit. A commonly used guideline is that an RMSEA of less than 0.05 indicates a good fit, while an RMSEA of greater than 0.10 indicates a poor fit. The RMSEA is calculated as the square root of the discrepancy divided by the degrees of freedom, with a correction factor to adjust for small sample sizes. The discrepancy is calculated as the difference between the observed covariance matrix and the model-implied covariance matrix, and the degrees of freedom are the number of independent observations minus the number of estimated parameters (Kline, 2023).

In this study, RMSA was used to assess the fit of an SEM. This influenced the outcome of the second, fourth and fifth research objectives.

4.9.13 Spearman's Rank Correlation Coefficients / T-Tests

A t-test is a statistical method used to determine if there is a significant difference between the means of two groups. The t-test is used when the sample size is small, the population standard deviation is unknown, and the data is normally distributed. The test is named after William Sealy

Gosset, who developed it in 1908 under the pseudonym “Student” (Raju, 2005). There are two types of t-tests: The independent samples t-test and the paired samples t-test. The Independent Samples t-test is used when the samples are independent, while the paired Samples T-test is used when the samples are dependent (Duncan, 1975).

Spearman’s rank correlation coefficient, also known as Spearman’s rho (ρ), is a statistical measure used to assess the strength and direction of the relationship between two variables. It is a nonparametric measure, meaning it does not require the data to be normally distributed. ρ is calculated by ranking each variable’s values and then calculating the difference between the ranks for each pair of observations. The correlation coefficient is then calculated based on these rank differences. The coefficient can range from -1 to +1, where a value of -1 indicates a perfect negative correlation, +1 indicates a perfect positive correlation, and 0 indicates no correlation. The ρ is commonly used when the data is ordinal, or the relationship between the variables is not linear. It can also be used as an alternative to (r) when the normality and homoscedasticity assumptions are unmet (Myers & Sirois, 2004; Xiao *et al.*, 2016).

This study used Spearman’s correlations to assess the strength and direction of the relationship between two variables. This influenced the outcome of the third research objective.

4.9.14 Squared Multiple Correlations

Squared Multiple Correlation (SMC) is a statistic used to estimate the proportion of variance in a criterion variable that can be explained by a set of predictor variables in multiple regression analysis. It is also known as the coefficient of determination or R-squared. SMC ranges from 0 to 1, with values closer to 1 indicating a stronger relationship between the predictor and criterion variables. It is calculated as the square of the correlation coefficient between the predicted and observed values of the criterion variable. SMC is useful in evaluating the overall predictive power of a set of predictor variables in a multiple regression model. A high SMC indicates that the predictor variables are strongly related to the criterion variable and account for a large proportion of the variance in the criterion variable (Cohen *et al.*, 2013).

In this study, Squared Multiple correlations were used to estimate the proportion of variance in a criterion variable. This influenced the outcome of the fourth and fifth research objectives.

4.9.15 Regression Coefficients

It was determined using multiple regression analysis to determine impostor tendency, self-esteem, decision-making self-efficacy and IWB. Similar to basic regression, multiple regression also requires some variables. There are no changes to the underlying presumptions, interpretation of regression results, or the coefficient of determination (Konasani & Kadre, 2015). In regression models, the correlation coefficient or R^2 is a statistical metric used to determine how much variance the independent variable can explain in the dependent variable. Fitting a regression line between the independent and dependent variables is the goal of multiple regression (Konasani & Kadre, 2015).

The results from a regression study where the underlying data have been standardised so that the variances of dependent and independent variables are identical to 1 are known as standardised (regression) coefficients. Also known as beta coefficients or beta weights, a statistical metric known as correlation shows how linearly linked two variables are (meaning they change together constantly). It is frequently used to describe direct connections without explicitly stating cause and effect.

This study computed a standard regression analysis to test the central research hypothesis, stating that the IP significantly influenced decision-making self-efficacy and IWB. A hierarchical multiple regression analysis was performed to control for the mediating influence of self-esteem on the relationship between the IP, decision-making self-efficacy and IWB. This influenced the outcome of the second, fourth and fifth research objectives.

4.9.16 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) is a statistical technique used to model complex relationships among variables. It combines aspects of multiple regression analysis, factor analysis and path analysis to estimate the relationships between latent and observed variables. SEM involves specifying a set of hypothesised relationships between variables, which are represented by a path diagram. The path diagram shows the relationships between latent and observed variables, which are estimated using maximum likelihood or another method. SEM can be used to test theories, estimate causal effects and explore relationships among variables. It can also be used for CFA, where the researcher tests whether a set of observed variables fits a hypothesised factor structure (Kline, 2023).

In this study, SEM was used to model complex relationships among research constructs. This influenced the outcome of the fourth and fifth research objectives.

4.10 STUDY'S ASSUMPTIONS, DELIMITATIONS AND LIMITATIONS

4.10.1 Assumptions

The following quantitative approaches are predicated on certain assumptions. In this study, Reality is objective, "out there," and unrelated to the researcher in this study and can be objectively studied. The researcher maintained a distance and independence from the subjects of their research. The study is also value-free since the researcher's values did not influence or ingratiate themselves. This research was conducted by using a questionnaire. This study used a cross-sectional questionnaire to infer the characteristics of a large population of interest based on a subset of that population: managers/leaders in South Africa.

Each study has a certain number of limitations. Limitations are uncontrolled shortcomings or influences resulting from the investigator's restrictions. Certain restrictions apply to the scope of a study, which the researcher usually decides. The term "delimitations" is commonly used to refer to them. Kroll described delimitations as the investigator's choice of a practical study topic, such as using a single personality test to evaluate personality characteristics (Kroll, 1972).

Each study requires a set of essential assumptions to begin. Therefore, they postulate the existence of specific circumstances and the ability to witness and quantify the behaviours. The fundamental purpose of quantitative research is to quantify the data. It permits generalisations of the results by examining the views and reactions of the sample population. Each research strategy is separated into two fundamental stages: planning and execution. As a result, there will most likely be limits beyond our control throughout these activities (Kroll, 1972).

Resources for data collecting in research projects may be insufficient. Many developing countries lack the expertise and, more importantly, the resources required to conduct in-depth quantitative research. Large sample sizes are usually needed for quantitative research methodologies. However, a lack of resources makes such a sizeable inquiry impractical. Researchers can also be unable to adjust the setting: Occasionally, researchers have difficulty maintaining control over the context in which respondents submit questionnaire replies. Responses are frequently contingent on a certain period and the variables throughout that period (Kroll, 1972).

Quantitative research outcomes are constrained: In quantitative research, standardised questionnaires with closed-ended questions are used. As a result, the findings are not necessarily accurate representations of what occurred. Additionally, respondents' response options are limited by the researcher's decision. Consequently, the study proposal specifies the restricted outcomes.

Conducting quantitative research is challenging, costly and time-consuming. This project must be meticulously planned to guarantee accurate randomisation and selection of suitable control groups. To accurately reflect the intended population, a high response rate is necessary. Data analysis is often challenging. Quantitative research requires extensive statistical analysis, which can be challenging for researchers with less statistical expertise. Since statistical analysis is a scientific field, it is challenging for non-mathematicians.

This study explores the IP as an individual experience of thinking that one is not as qualified as others believe one to be (naturalistic research); it also examines the structure of this phenomenon from a management perspective: leadership/managerial praxis (inductive research). Finally, this analysis examines how the phenomenon influences specific leadership constructs' efficacy by focusing on decision-making self-efficacy and IWB (holistic research).

Because of the quantitative character of this study, a range of unique styles of reasoning was required: inductive, deductive and abductive reasoning. Hughes and Lavery (2015) characterise inductive reasoning as progressing from an exact particular to the whole, demonstrating the approach as forming inferences and suppositions based on observation.

Inductive reasoning is used as a logic analysis tool in Chapters 2-3, developing the theoretical structure. The IP and crucial leadership skills, such as self-efficacy in decision-making and innovative work practices, are described in this chapter. The importance of self-esteem as a mediating factor in the link between the three constructs is also examined. Berg and Latin (2008) describe deductive reasoning as the process of thinking that emerges from a comprehensive viewpoint to distinct particulars, contrary to inductive reasoning. Hughes and Lavery (2015) suggest that deductive reasoning leads to the desired conclusion when provided facts or hypotheses are used. As a result, a diverse set of assumptions is used to derive a broad conclusion.

Blank further argues that in science, reasoning is primarily concerned with establishing the necessary and sufficient conditions for explaining a phenomenon (Blank, 1984). Scientific thinking

also entails investigating facts, relationships among things and the physiologies of these items. Persons can meticulously discover an object's apparent existence and its relationships or expand their knowledge to learn about unknown subjects (Misra, 1989). Chapter 5 uses deductive reasoning to illustrate the connections between the IP and leadership constructs.

Alvesson and Kärreman (2007) describe abductive reasoning as beginning with an unexpected condition in which rational reason operates by opposite activities that stimulate developments within a dependable setting or a model that provides meaning for the unexpected condition. Abductive reasoning is the imaginative proclamation of an original theory that addresses an unexpected condition (Alvesson & Kärreman, 2007). Abductive reasoning is defined as the application of recognised interpretive theory. It is also defined as detecting unusual conditions considering established interpretive theory.

Reichertz describes abduction as uncovering or constructing specific asset arrangements (Reichertz 2019). There is no adequate explanation in the current body of knowledge; such construction or uncovering is based on a cognitive appraisal of accumulated data (Dixon *et al.*, 2010). Chapter 6, where conclusions from Chapter 5 are gathered, incorporates the notions that lead to abductive reasoning in this research.

4.10.2 Limitations

This study will assess how innovative work habits and decision-making self-efficacy relate to the IP of leadership traits. The managers (leaders) in South Africa are the subject of this investigation. As a result, the study's results might not apply to a global population.

4.10.3 Delimitations:

Delimitations represent the controlled parameter of this study. This research links the IP, leadership skills, IWB and decision-making. The delimitations, therefore, are as follows:

- The research questions: This study is limited by the concepts determined by the study's methodology. Therefore, principles are limited by this scope and exclude other factors that may emerge from the study.
- The scope of the study: This study, which focuses on managers/leaders in South Africa, explores how the IP affects essential leadership qualities, including innovative work behaviour and self-assurance in one's decision-making.

- Theoretical perspectives: As shown in this study, the perspectives adopted offer a controlled view of the impact of the IP and how this phenomenon may affect leadership. This study examines this topic from the vantage point of leaders/managers in South Africa. It does not reflect a comprehensive perspective but only represents this specific perspective.

Leaders/managers want to understand how these factors affect decision-making self-efficacy and IWB. This study assesses the link between the IP and effective leadership. Managers and leaders may control and manage this link by recognising its effects. Additionally, leaders/managers wish to mitigate the future effects of such a phenomenon on decision-making and IWB.

4.11 ETHICAL CONSIDERATIONS

Ethical clearance was requested from the NWU Ethical Committee (NWU-00670-22-A4) (Annexure E). Before individuals were invited to participate in this study, permission was obtained from the participants. The aim of this study was communicated to the participants. Participants in this study acknowledged and agreed that they understood the questionnaire's aim. They were aware that taking the questionnaire was entirely voluntary. Since this study preserved their identity, their names were not disclosed. Participants had the choice to cease participation at any time during the research. They were assured that their data would only be used for this research project.

The POPI Act protects personal information obtained from respondents. Participants consented to the following within the questionnaire: The respondents agreed not to use their personal information and affirmed that it was submitted willingly, without undue influence from any party or coercion. The respondents recognised their rights concerning personally identifiable information gathered during this questionnaire. The respondents had the right to inspect and correct the information at any reasonable time. If the respondent objected to the information being processed, this agreement within the questionnaire would end, and the respondent could access the information reasonably to correct it.

In terms of the POPI Act, the following was communicated to the respondent: This questionnaire forms part of research for completing a doctorate from the NWU; participating in this questionnaire was voluntary, and the respondent was not obligated to do so; there were no repercussions if the respondent did not complete the questionnaire.

Any information the respondent submitted was kept strictly confidential. Any personally identifiable information (such as demographics) was handled following the POPI Act's standards (Act 4 of 2013). Following the Act, it is vital to note that the respondent was not obligated to provide personal information (i.e., demographics). Information is stored and protected in a password-protected file in the researcher's Google Drive folder, making it impossible for anyone else to access it.

By completing this questionnaire, the respondents consented to use the data they submit for research purposes – for scholarly publications and conferences. The institution will keep the data on file for five years after collection. The only individuals who could access the information were the student and her mentor, and it would not be sent outside of South Africa. Only the whole sample's results were used and published anonymously. None of the questions in the questionnaire has correct or wrong answers, and the "Economic and Management Sciences Research Ethics Committee (EMS-REC)" authorised this project and reserved the right to audit it to guarantee compliance.

The NWU ethical guidelines guide this research at North-West University. The NWU Ethical Committee was contacted to get ethical approval before data collection for the research. To comply with ethical committees' regulations, the following recommendations were adhered to: Participants had to consent before participating in this study. The purpose of the study was explained to the participants. Participants in this study acknowledge and agree that they understand the questionnaire's aim. Respondents acknowledged that they were aware that taking the questionnaire was entirely voluntary.

The POPI Act protected personal information obtained from respondents within this study. Participants consented to the following within the questionnaire: that the data included within the questionnaire affirms that the information was submitted willingly, without undue influence from any party and coercion. The respondent recognises that they know their rights concerning personally identifiable information gathered during the questionnaire. The respondent has the right to: inspect and correct the report at any reasonable time. If the respondent objects to the data being processed, this agreement within the questionnaire is ended, and the respondent can access the information at any reasonable time to correct it.

Additionally, the responder was informed of the following under this Act: This questionnaire is a component of the study required for an NWU doctorate. Participating in this questionnaire is

entirely voluntary, and the respondent is not obligated to do so. There were no adverse effects if the respondent did not complete the study.

Any information provided by the responder was maintained in absolute confidence, and any personally identifiable data (such as demographic data) was handled following the requirements of the POPI Act. The respondent is not required to submit personal information (i.e., demographics) under the statute. If the respondent chooses not to give personal information, there are no adverse effects, and the respondent can request access to the respondent's personal information to make changes. This data was kept and secured in a password-protected file in the researcher's Google Drive folder to prevent unauthorised access.

Five years after collecting, the institution kept the data on file. The only individuals who could access the information were the student and her mentor, and it was not sent outside South Africa. Only the whole sample's results were used and published anonymously. As a result, the respondent's findings were never shown or shared. By completing this questionnaire, the respondents consented to use the data they shared for research purposes, scholarly publications, and conferences.

4.12 SUMMARY

In this chapter, the research paradigm was discussed in more detail. Within this chapter, the terminology often associated with the basic research paradigm, such as the research method, Ontology, Epistemology, Theoretical Perspective, methodology and the method of this study, were included. The research plan, philosophy and research methodology are all included in this chapter, along with the study's presumptions. The demographic, ethical implications, tools, data-gathering process and analysis were also described.

The next chapter, Chapter 5, presents the data analysis and interpretation of results.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION OF RESULTS

“Instead of thinking outside the box.
get rid of the box.”
- Deepak Chopra

5.1 INTRODUCTION

The quantitative findings of the cross-sectional questionnaire are examined in this. The IP, IWB and self-efficacy in decision-making are all topics covered in this analysis. The demographics and sample size of the data are included in this chapter. Issues relating to the research design and the data are examined. The process of data analysis and interpretation is also covered. Finally, this chapter develops links between the critical components of the research. It will also be assessed whether self-esteem had a mediating function in this study.

By determining the influence of the IP on IWB and decision-making self-efficacy, managers can identify, understand, manage and control the impact of this phenomenon. A quantitative cross-sectional survey was used in this research to examine the phenomenon's effect on the leadership's competencies, namely IWB and decision-making self-efficacy.

The study aimed to highlight the role of self-esteem as a mediating variable in the relationship between the IP and these leadership competencies. To attain the research objectives, statistical analyses were performed using the SPSS software version 28.

Descriptive statistics measured the IP, self-esteem, decision-making self-efficacy and IWB levels. As discussed in Chapter 4, these descriptive statistics comprised frequency distributions and measures of dispersion. Cronbach's alpha coefficients were computed to verify the reliability of the measuring instrument. Factor analysis was used to determine the construct validity of the questionnaire. Inferentially, t-tests were performed to determine whether the biographical variables had a statistically significant influence on the dependent variables. Furthermore, the standard error of the mean (SEM) was calculated to determine the relationships between the constructs and the mediating influence of self-esteem.

In this chapter, the results of the quantitative questionnaire are presented. This chapter includes the sample demographics, descriptive statistics and the statistical findings concerning these

research objectives. The descriptive statistics of the demographic characteristics of the respondents of this questionnaire are presented in the first section.

5.2 THE DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

In Table 5.1, the demographic characteristics of the respondents are presented.

Table 5.1: Biographical Profile of the Sample (N=616)

VARIABLE	LEVEL OF THE VARIABLE	N	%	CUMULATIVE %
Gender	Male	342	55.5	55.5
	Female	270	43.8	99.4
	Other	4	.6	100.0
Age	20 - 29 yrs.	101	16.4	16.4
	30 - 39 yrs.	158	25.6	42.0
	40 - 49 yrs.	165	26.8	68.8
	50 - 59 yrs.	144	23.4	92.2
	60 plus yrs.	48	7.8	100.0
Qualification	Higher certificate and NDP	24	3.9	3.9
	Advanced Diploma and Bachelor degree	136	22.1	26.0
	Honours degree	153	24.8	50.8
	Magister degree	212	34.4	85.2
	Doctorate	91	14.8	100.0
Managerial / leadership experience	1 - 5 yrs.	217	35.2	35.2
	6 - 10 yrs.	124	20.1	55.4
	11 - 15 yrs.	90	14.6	70.0
	16 - 20 yrs.	66	10.7	80.7
	21 - 25 yrs.	55	8.9	89.6
	26 - 30 yrs.	32	5.2	94.8
	30 and more yrs.	32	5.2	100.0
Role	Supervisory role	152	24.7	24.7
	Middle management	229	37.2	61.9
	Senior management	235	38.1	100.0
Sector	Public	290	47.1	47.1
	Private	326	52.9	100.0

** All estimates were statistically significant

As seen in Table 5.1, most of the sample was male ($n = 342$; 55.5%), while 43.8% ($n = 270$) respondents, were female. Additionally, 0.6% of the sample representing four respondents, selected 'other'. In terms of age distribution. 26.8% ($n = 165$) of the sample could be classified in the 40-49 years age group, followed by 25.6% ($n = 158$) of the sample in the 30-39 years age category, 23.4% ($n = 144$) of the sample were in the 50-59 years age category and 101 (16.4%) respondents in the 20-29 years age group. Only 7.8% ($n = 48$) of respondents were in the 60 years or older category. Regarding the highest academic qualification of respondents, 3.9% ($n = 24$) of the sample had a higher certificate and or national diploma, while 22.1% ($n = 136$) had either an advanced diploma or bachelor's degree. Furthermore. 24.8% ($n = 153$) of the sample

held an honours degree; 34.4% ($n = 212$) had a magister's degree; and 14.8% ($n = 91$) had a doctoral qualification. When considering the years of managerial and leadership experience, most of the sample ($n = 217$. 35.2%) had between one and five years' experience; this was followed by respondents with between 6 and 10 years' experience ($n=124$. 20.1%); those with between 11 and 15 years' experience ($n = 90$.14.6%), respondents with 16 to 20 years' experience ($n = 66$. 10.7%) and 21 to 25 years' experience ($n = 55$. 8.9%). Lastly, 5.2% of the sample representing 32 respondents had between 26 and 30 years' experience and 30 or more years' experience, respectively.

The following section presents the descriptive statistics of the IP, self-esteem, decision-making self-efficacy and IWB levels. Considering the roles, respondents are currently performing, most of the sample indicated that they were in senior management ($n = 235$, 38.1%), followed by middle management ($n = 229$, 37.2%), and 24.7% ($n = 152$) had a supervisory role. The sample was almost equally divided regarding the sector in which respondents were employed. As such 47.1% ($n = 290$) of the sample was employed in the public sector, while 52.9% representing 326 respondents, were employed in the private sector.

5.3 DESCRIPTIVE STATISTICS OF QUESTIONNAIRES

The fundamental characteristics of this dataset are described, illustrated and summarised using descriptive statistics. This summary provides details about this data sample and its measurements. These details make it easier to comprehend the data. The following section will present descriptive data and the highlights of each dataset within this study.

As discussed in section 4.9, Data analysis, and descriptive statistics were used to support the findings for research objective 1: The IP, self-esteem, decision-making self-efficacy and IWB measuring instruments validity and reliability in the South African context.

5.3.1 Descriptive Statistics: IP

Table 5.2 below presents the IP scale's item- and scale properties.

Table 5.2: Item- and Scale Properties of the IP scale

IMPOSTOR PHENOMENON	MEAN	STD. DEVIATION
1. Despite former successes, I have a strong fear of failure.	40.21	31.91
2. I make many things more difficult for myself by putting off my work.	28.12	29.63
3. I often overestimate my skills.	19.46	22.01
4. I often think that my skills are not enough.	35.75	30.13

IMPOSTOR PHENOMENON	MEAN	STD. DEVIATION
5. Examination situations are very stressful for me.	32.61	28.97
6. I often postpone starting important tasks.	31.25	29.05
7. My colleagues' expectations of me are too high.	39.16	29.05
8. For me, it is very important to create something significant.	63.62	27.70
9. For me, it is important to appear sympathetic.	46.80	29.33
10. My fear of failure often spoils the fun at work.	33.12	30.53
11. I start my tasks earlier than others do.	47.48	29.05
12. It is important for me to be liked.	35.50	28.62
13. I am not convinced of my capabilities.	31.23	30.12
14. A failure is no reason for me to doubt my abilities.	44.50	29.76
15. A job in which I have many subordinates will satisfy me.	33.98	28.29
16. I am considered a very helpful person.	65.88	24.83
17. I usually finish important tasks at the last moment.	34.92	30.37
18. Mostly, I am dissatisfied with the quality of my work.	25.02	27.36
19. Achieving something significant is what matters most to me in life.	56.33	28.52
20. Individuals overestimate me.	31.02	27.30
21. When others achieve very good results, it makes me feel emotional.	30.31	29.57
22. Often I behave authentic.	56.06	28.42
23. I'm afraid to fail, even though I am mostly successful.	45.44	31.43
24. I often distract myself, even though I have a lot to do.	40.23	31.70
25. I often feel like I am holding back my true personality.	34.97	31.22
26. When I am successful, I often have the feeling that failure will follow.	28.44	29.17
27. I am often thought to be smarter than I am.	38.64	30.43
28. I am rarely my real self.	21.61	26.93
29. I usually do the most important tasks first.	57.34	28.12
30. High expectations of me by others stress me.	38.72	31.76

* n= 616. Scale: Minimum=1. Max=100

** All estimates were statistically significant

Table 5.2 shows an overall negative tendency; thus, respondents' impostor tendencies are low. The items with the most significant means are item 16, *Need for Sympathy* (M = 65.88, SD = 24.83), item 8, *Ambition* (M = 63.62, SD = 27.10) and item 29, *Working Style* (M = 57.34, SD = 28.12). This shows that the respondents stressed the importance of producing something meaningful, wanting to be seen as helpful and prioritising essential duties.

The items which indicated the least effective means are item 18, *Competence Doubt* (M = 25.02, SD = 27.36), item 28, *Alienation* (M = 21.61, SD = 26.93) and item 3, *Other-Self Divergence* (M = 19.46, SD = 22.01). This demonstrated that respondents were satisfied with their work quality, frequently presented a realistic image of themselves, and did not overrate their abilities.

5.3.2 Descriptive Statistics: Self-Esteem

Table 5.3 presents the item- and scale properties of the self-esteem scale.

Table 5.3: Item- and Scale Properties of the Self-Esteem Scale

SELF-ESTEEM	MEAN	STD. DEVIATION
1. On the whole. I am satisfied with myself.	1.79	.79
2. At times I think I am no good at all.	2.83	.99
3. I feel that I have a number of good qualities	1.56	.70
4. I am able to do things as well as most other individuals.	1.61	.72
5. I feel I do not have much to be proud of.	3.16	.94
6. I certainly feel useless at times.	2.92	.98
7. I feel that I am a person of worth, at least on an equal plane with others.	1.70	.72
8. I wish I could have more respect for myself.	2.51	1.05
9. All in all. I am inclined to feel that I am a failure.	3.29	.88
10. I take a positive attitude toward myself	1.68	.80
<i>Averages</i>	<i>2.31</i>	<i>.87</i>

* n= 616. Scale: Minimum=1. Max=4

** All estimates were statistically significant

Table 5.3 indicates an overall negative tendency of this scale, thus indicating that the respondents have high self-esteem tendencies. The items with the most effective means are items 9 (M = 3.29, SD =.88), item 5 (M = 3.16, SD =.94) and item 6 (M = 2.92, SD =.98). This suggests that respondents do not frequently feel like failures, have much to be satisfied with, and do not feel useless. The items with the least effective means are item 10 (M = 1.68, SD =.88), item 4 (M = 1.16, SD =.72) and item 3 (M = 1.56, SD =.70). This shows that individuals have an optimistic outlook, believe they can do things better than others, and have several positive traits.

5.3.3 Descriptive Statistics: Managerial Decision-Making Self-Efficacy

Table 5.4 below presents the Managerial Decision-Making Self-Efficacy scale's item- and scale properties.

Table 5.4: Item- and Scale Properties of the MDMSE Scale

Managerial Decision-Making Self-Efficacy	MEAN	STD. DEVIATION
1. Think clearly and keep all the relevant factors and information in mind	83.83	13.38
2. Control my level of attention and concentration when time pressure mounts	82.97	14.96
3. Limit negative thoughts entering my mind	71.59	20.10
4. Refrain from worry about my decision choices and consequences	68.08	19.23
5. Contain my self-doubt about my ability to deal with adverse consequences	71.02	18.35
6. Remain confident to make sound judgements and the right choices	81.53	14.74
7. Know what to do next in decision-making	82.39	13.51
8. Feel that I am making the right decisions	81.01	14.13
9. Make difficult decisions under time pressure	80.58	15.74
10. Use a methodical thinking process in my decisions.	81.09	14.66
11. Analyse and interpret numerical/quantitative data accurately	80.68	15.73
12. Discover a range of alternatives/several solutions	82.24	13.34

Managerial Decision-Making Self-Efficacy	MEAN	STD. DEVIATION
13. Weigh negative and positive consequences of each alternative option	82.63	13.37
14. Refrain from changing my mind to the least objectionable alternative	74.11	16.89
15. Trust my own judgement and express my opinions firmly	82.13	15.33
16. Influence decisions with certainty that they will work	80.52	14.07
17. Readily commit to my decisions	83.85	14.69
18. Appraise a business decision problem situation quickly	80.37	14.79
19. Search for new information and alternatives	85.67	12.72
20. Obtain information by seeing what needs to be known	83.70	13.68
21. Narrow down list of alternatives that appear as effective options	82.14	14.65
22. Manipulate quantitative data to identify trends, problems and their causes	75.93	19.96
23. Choose the best alternatives given the situation	83.85	12.69
24. Persevere in my persuasive attempts to convince others of my decision choice	78.91	15.18
25. Make decisions that contain risks and potentially unfavourable consequences	72.29	19.30
26. Make decisions and persevere with actions to make them pay off	78.98	15.49
27. Secure resources to implement my decisions	80.62	14.88
28. Convince others of my decision choice even when opposition mounts	77.11	16.61
29. Influence decisions regardless of the amount of control I have over organisational constraints	74.14	17.03
30. Refrain from putting off difficult decisions	71.51	20.81

* n= 616. Scale: Minimum=1. Max=100

** All estimates were statistically significant

Table 5.4 indicates an overall positive tendency of this scale, indicating that respondents have high levels of decision-making self-efficacy. The items with the most significant means are items 19, *Exploratory search and processing* (M = 85.67, SD = 12.72), item 23, *Exploratory search and processing* (M = 85.85, SD = 12.69) and item 17, *Thought Affect and Control* (M = 83.85, SD = 14.69). This shows that respondents frequently look for new information and options, select the best options given the circumstances, and easily adhere to their choices.

The items with the least significant means are item 30, *Social Influence Efficacy* (M = 71.51, SD = 20.81), item 5, *Thought and affect control* (M = 71.02, SD = 18.38), and item 4, *Thought affect and control* (M = 68.08, SD = 19.23). It suggests that individuals do not avoid making tough decisions, have self-doubt about their abilities to handle adverse outcomes, and do not worry about their decision-making process and its outcomes.

5.3.4 Descriptive Statistics: Innovative Work Behaviour

Table 5.5 presents the IWB scale's item- and scale properties.

Table 5.5: Item- and Scale Properties of the MDMSE Scale

INNOVATIVE WORK BEHAVIOUR	MEAN	STD. DEVIATION
1. I am able to develop ideas and solutions for creative opportunities in my field	4.18	.94
2. I share ideas with my colleagues or supervisors about opportunities for the development of Working methods within the organisation	4.19	.94
3. I share ideas with my colleagues or supervisors about the opportunities to find solutions to the problems we face at work	4.22	.92
4. I discuss with my colleagues or supervisors the possible opportunities to change work patterns to achieve better results	4.14	.96
5. I propose new ideas for development within the organisation	4.10	1.01
6. I am able to express personal opinions about basic problems in the workplace	4.06	.97
7. I discuss personal ideas for work improvement with colleagues	3.99	.98
8. I share ideas about concrete changes at work with colleagues	4.07	.93
9. I suggest improvements to ideas expressed by colleagues or bosses at work	4.04	.94
10. I am able to convince others of the importance of an improved idea or a new solution	4.00	.96
11. I propose the new idea to key individuals authorised to allocate resources to this new idea	3.96	.95
12. I promote supervisors' new ideas	3.99	.96
13. I promote colleagues' new ideas	4.07	.91
14. I introduce to colleagues to use an idea or a new solution	4.09	.89
15. I illustrate how the new idea can be applied gradually and practically to others	4.05	.92
16. Testing solutions for unexpected problems that arise when ideas are put into practice	3.86	.86
17. Analysing solutions arising from unwanted effects, when putting ideas into practice	3.96	.88
18. Monitoring progress during the process of putting ideas into practice	4.01	.90
19. Identifying the criteria for success to achieve or to realise the new idea	4.03	.87
20. Keeping colleagues informed about progress in achieving the idea	3.98	.97
21. Critical thinking about the procedures that are followed when putting the idea into practice	4.07	.88
22. Designing practical (operational) strategies for similar future situations	4.04	.88
23. Comparing the results of the proposed ideas with the original predetermined goals	4.01	.90
24. Engaging with colleagues to further develop the idea	4.08	.90
25. Initiating collaboration with other groups in the organisation to apply the new idea in other contexts as well	3.95	1.00
26. Discussing with colleagues how to consolidate ideas that have been implemented more strongly in the organisation's system	3.92	.95
27. Awareness of the steps that can be taken to make the implementation of the proposed idea a success	4.07	.93

* n= 616. Scale: Minimum=1. Max=5

** All estimates were statistically significant

Table 5.5 indicates that this scale has an overall positive tendency, indicating that respondents have high-level IWB. The items with the most significant means are item 3, *Opportunity exploratory* (M = 4.22, SD =.92), item 2, *Opportunity exploratory* (M = 4.19, SD =.94) and item 1, *Opportunity exploratory* (M = 4.19, SD =.94). This suggests that respondents discuss potential answers to their work issues with their co-workers or managers. Respondents can create

concepts and solutions for innovative opportunities in their area and discuss opportunities for developing working methods within the organisation with their co-workers or superiors.

The items with the most significant means are items 25, *Idea Sustainability* ($M = 32.95$, $SD = 1.00$), item 26, *Idea Sustainability* ($M = 3.92$, $SD = .95$) and item 16, *Idea realisation* ($M = 3.86$, $SD = .86$). This shows that respondents are less likely to support starting a partnership with other organisational groups to apply the new concept in additional settings and discussing with peers how to consolidate concepts that have been more thoroughly integrated into the organisation's structure. They also expressed less support for trying remedies for unforeseen issues when implementing concepts. The psychometric properties of the measuring instruments used in this study are presented in the next section.

5.4 PSYCHOMETRIC PROPERTIES OF THE MEASURING INSTRUMENTS

The reliability and validity of the IP, self-esteem, Decision-making self-efficacy and IWB measuring instruments are elaborated on sequentially. Table 5.6 below presents the Innovative Work Behaviour Scale's items- and scale properties. Within this section, the α will be used to determine the reliability of the measuring instruments. A CFA confirms validity on instruments with the following fit indices: CFI, Chi-square value/ degrees of freedom, and RMSEA is the root mean square error of approximation. This is further supported by standardised (regression) coefficients, PTV and factor loadings.

As discussed in Section 4.9, Data analysis, these methods were used to support the findings for Research Objective 2: The IP, self-esteem, decision-making self-efficacy and IWB measuring instruments validity and reliability in the South African context.

Table 5.6: Cronbach's Alpha and Descriptive Statistics of Research Instruments

SCALE	α	MINIMUM	MAXIMUM	MEAN	STD. DEVIATION
Total Score	.926				
IP	.926				
1 Competence Doubt	.913	.00	100.00	34.08	22.57
2 Working style	.791	.00	100.00	33.63	25.79
3 Alienation	.601	.00	100.00	37.54	21.56
4 Other-Self Divergence	.765	.00	97.50	32.07	20.97
5 Ambition	.699	.00	100.00	51.31	22.25
6 Need for Sympathy	.713	.00	100.00	49.39	22.03
Self-Esteem	.858	10.00	40.00	18.64	5.74
Managerial Decision-Making Self-Efficacy	.951	31.00	100.00	79.18	10.15

SCALE	α	MINIMUM	MAXIMUM	MEAN	STD. DEVIATION
1 Thought and affect control	.909	33.33	100.00	79.12	11.20
2 Exploratory Search and Processing Efficacy	.912	32.50	100.00	82.65	10.86
3 Analytical and inferential efficacy	.681	30.00	100.00	77.95	12.10
4 Social Influence Efficacy	.822	25.00	100.00	75.49	12.75
Innovative Work Behaviour	.977	1.00	5.00	4.04	0.74
1 Opportunity Exploration	.938	1.00	5.00	4.18	.86
2 Idea realisation	.904	1.00	5.00	4.05	.82
4 Idea Promotion	.933	1.00	5.00	4.03	.81
5 Idea generation	.935	1.00	5.00	3.99	.76
6 Idea Sustainability	.920	1.00	5.00	4.01	.81
Valid N (listwise)	616				

* If the sample number is sufficient. The central limit theorem states that the sampling distribution of the mean will always be regularly distributed. The selection distribution of the mean will be standard regardless of whether the community has a normal. Poisson. binomial. Or any other distribution (Kwak & Kim, 2017)

** All estimates were statistically significant

5.4.1 Reliability of Measuring Instruments

Table 5.6 provides the α results for the different sub-scales, including the total scale. As seen from this table, the α for all the sub-scales ranged from .86 to .98. which can be deemed very good. The sub-scale items α 's are discussed as follows:

- *IP*: the α for all the sub-scales ranged from .601, Alienation, to .913, Competence Doubt. The total scale had an α of .926. which can be seen as very good.
- Self-esteem: The total scale had an α of .858. which can be seen as good.
- Managerial Decision-Making Self-Efficacy: the α for all the sub-scales ranged from .681, Analytical and Inferential Efficacy, to .912, Exploratory Search and Processing Efficacy. The total scale had an α of .951. which is very good.
- Innovative work behaviour: the α for all the sub-scales ranged from .904, Idea realisation, to .938, Opportunity Exploration. The total scale had an α of .977. which can be seen as very good.

In the next section, the averages of the data sets are presented.

Please note that items 11, 14 and 29 of the IP scale affected the α negatively in this study. These items were therefore excluded from the analysis of this study. The IP scale, therefore, consisted of 27 items instead of the original 30 items included in the original scale.

5.4.2 Averages of the Data Set

Table 5.7 below presents the averages on the data sets.

Table 5.7: Averages of the Data Sets

SCALE		α	MEAN	STD. DEVIATION
Total Score		.926		
IP		.926		
1	Competence Doubt	.913	34.08	22.57
2	Working Style	.791	33.63	25.79
3	Alienation	.601	37.54	21.56
4	Other-Self Divergence	.765	32.07	20.97
5	Ambition	.699	51.31	22.25
6	Need for Sympathy	.713	49.39	22.03
Self-Esteem		.858	18.64	5.74
Managerial Decision-Making Self-Efficacy		.951	79.18	10.15
1	Thought and affect control	.909	79.12	11.20
2	Exploratory Search and Processing Efficacy	.912	82.65	10.86
3	Analytical and Inferential Efficacy	.681	77.95	12.10
4	Social Influence Efficacy	.822	75.49	12.75
Innovative Work Behaviour		.977	4.04	0.74
1	Opportunity Exploration	.938	4.18	.86
2	Idea Realisation	.904	4.05	.82
4	Idea Promotion	.933	4.03	.81
5	Idea Generation	.935	3.99	.76
6	Idea Sustainability	.920	4.01	.81
Valid N (listwise)		616		

* If the sample number is sufficient, the central limit theorem states that the sampling distribution of the mean will always be regularly distributed. The selection distribution of the mean will be normal regardless of whether the community has a normal, Poisson, binomial, or any other distribution (Kwak & Kim, 2017)

** All estimates were statistically significant

Table 5.7 above provides the averages of the datasets discussed in this section:

The IP scores range from a minimum of 0 to a maximum of 100. On the IP scale, participants reported a mean score of 34.08 (SD = 22.57) on the Competence Doubt sub-scale, indicating reasonable doubt in their abilities. On the Working Style sub-scale, participants reported a mean score of 33.63 (SD = 25.79), indicating a tendency towards perfectionism and overworking. On the Other-Self-divergence sub-scale, participants reported a mean score of 32.07 (SD = 20.97), indicating moderate levels of feeling disconnected from their true selves. On the Ambition sub-scale, participants reported a mean score of 51.31 (SD = 22.25), indicating moderate levels of determination. Participants reported a mean score of 49.39 (SD = 22.03) on the Need for Sympathy sub-scale, indicating a moderate need for external validation. Finally, participants reported a mean score of 37 on the Alienation sub-scale. 54 (SD = 21.56), indicating moderate feeling disconnected from others.

For self-esteem, the participants had scores ranging from 10 to 40, with a mean score of 18.64 (SD = 5.738). The minimum score of 10 suggests that individuals in the sample had low self-esteem, while the maximum score of 40 indicates that some individuals may have high self-esteem. The average self-esteem score of 18.64 falls within the middle range of the possible scores and suggests that, on average, participants had moderate self-esteem. The standard deviation of 5.738 suggests some variability in self-esteem scores, with some participants having scores relatively far from the mean.

The Managerial Decision-Making Self-Efficacy scores range from a minimum of 25 to a maximum of 100. The mean score for the MDMSE measure was 79.18 (SD = 10.15), indicating that, on average, participants had relatively high MDMSE skills. Scores on the MDMSE sub-scales were as follows: *Thought and Affect Control* ranged from 33.33 to 100 (M = 79.12, SD = 11.20). *Exploratory Search and Processing Efficacy* ranged from 62.50 to 100 (M = 82.65, SD = 10.86). *Analytical and Inferential Efficacy* ranged from 30 to 100 (M = 77.79, SD = 12.10), and *Social Influence Efficacy* ranged from 25 to 100 (M = 77.49, SD = 12.75). These results provide valuable information about the MDMSE skills of the sample. The mean score of 79.18 on the MDMSE measure suggests that participants had higher levels of MDMSE skills than the midpoint of the scale. The standard deviation of 13.14 indicates some variability in scores, with some participants scoring higher or lower than the mean. The relatively high mean scores for *Thought and Affect Control* and *Exploratory Search and Processing Efficacy* suggest that participants could manage their emotions and engage in creative thinking. The mean *Analytical and Inferential Efficacy* score indicates that participants may struggle with logical reasoning and problem-solving. In contrast, the mean score for *Social Influence Efficacy* suggests that participants could persuade and influence others.

The Innovative Work Behaviour scores range from a minimum of 1 to a maximum of 100. The descriptive statistics for this study's five factors of IWB participants were, on average, moderately engaged in each stage. The mean score for *Opportunity Exploration* was 4.18 (SD = 0.86), indicating that participants tended to explore opportunities for innovation moderately. Similarly, the mean score for *idea generation* was 3.99 (SD = 0.76), indicating that participants tended to generate ideas moderately. The mean score for *Idea Promotion* was 4.03 (SD = 0.81), indicating that participants tended to promote ideas to a moderate extent. The mean score for *Idea Realisation* was 4.05 (SD = 0.88), indicating that participants tended to realise ideas moderately. Finally, the mean score for *Idea Sustainability* was 4.01 (SD = 0.81), indicating that participants tended to sustain ideas moderately. These findings suggest that participants were moderately engaged in each stage, but there was some variability in their engagement levels.

In the next section, the validity of the instruments will be presented.

5.4.3 Validity of Instruments

This section presents the validity of the measuring instruments within this study of the IP, self-esteem, decision-making self-efficacy and IWB. This section will use CFA to confirm the validity.

Please note that in this section, fit indices show whether the sample data and hypothetical model suit the study well. Because the χ^2 test is viewed by some as an overly strict indicator of model fit, given its power to detect even trivial deviations from the proposed model (Hancock *et al.*, 2010), Mueller suggested that the χ^2 test statistic be divided by degrees of freedom (Mueller, 1999). Interpretation of the size of this value depends mainly on the investigator's viewpoint, so a maximum of 5 can be presented. However, in practice, some interpret ratios as high as 3. 4 or even 5 as still representing a good model fit (Mueller, 1999). It is, however, considered good practice to report multiple fit indices, typically from three broad classes (Hancock & Mueller. 2010).

Blunch (2008) stated that models with RMSEA values of .10 and larger should not be accepted. RMSEA values .01, .05 and .08 indicate excellent, sound and mediocre fit, respectively; some go up to .10 for mediocre (Nevitt & Hancock, 2000). In the next section, the validity of these instruments is discussed in more detail. The CFI ranges from 0 to 1 (values greater than .90 conservatively .95 indicate a good fit). Mueller described values above 0.9 as indicative of a good overall fit for a CFI (Mueller *et al.*, 2018).

5.4.3.1 Validity of instrument: IP

The validation of the IP scale is presented in Table 5.8.

Table 5.8: Standardised Regression Weights: IP Scale

IMPOSTOR PHENOMENON			ESTIMATE
30. High expectations of me by others stress me.	<---	Competence Doubt	.772
26. When I am successful. I often have the feeling that failure will follow.	<---	Competence Doubt	.817
23. I'm afraid to fail, even though I am mostly successful.	<---	Competence Doubt	.790
21. When others achieve very good results, it makes me feel emotional.	<---	Competence Doubt	.464
18. Mostly. I am dissatisfied with the quality of my work.	<---	Competence Doubt	.648
13. I am not convinced of my capabilities.	<---	Competence Doubt	.707
10. My fear of failure often spoils the fun at work.	<---	Competence Doubt	.768
5. Examination situations are very stressful for me.	<---	Competence Doubt	.678
4. I often think that my skills are not enough.	<---	Competence Doubt	.773
. Despite former successes. I have a strong fear of failure.	<---	Competence Doubt	.751
24. I often distract myself, even though I have a lot to do.	<---	Working Style	.815
17. I usually finish important tasks at the last moment.	<---	Working Style	.742
6. I often postpone starting important tasks.	<---	Working Style	.865
2. I make many things more difficult for myself by putting off my work.	<---	Working Style	.784
28. I am rarely my real self.	<---	Alienation	.688
25. I often feel like I am holding back my true personality.	<---	Alienation	.771
22. Often I behave authentic.	<---	Alienation	.425
3. I often overestimate my skills.	<---	Other-Self Divergence	.516
7. My colleagues' expectations of me are too high.	<---	Other-Self Divergence	.735
20. Individuals overestimate me.	<---	Other-Self Divergence	.712
27. I am often thought to be smarter than I am.	<---	Other-Self Divergence	.733
15. A job in which I have many subordinates will satisfy me.	<---	Ambition	.415
19. Achieving something significant is what matters most to me in life.	<---	Ambition	.773
9. For me. it is important to appear sympathetic.	<---	Need for Sympathy	.686
12. It is important for me to be liked.	<---	Need for Sympathy	.584
16. I am considered a very helpful person.	<---	Need for Sympathy	.734

** All estimates were statistically significant *p.001 for all correlations

According to Table 5.8, the following items indicate the most vital relationships: item 6, *Working Style* ($p = .865$), item 8, *Ambition* ($p = .858$) and item 2 ($p = .784$), *Competence Doubt*. The items with a lower indication of relationship are item 21, *Competence Doubt* ($p = .464$); item 22, *Alienation* ($p = .425$) and item 15, *Ambition* ($p = .145$). The correlations of these sub-areas are depicted in the illustration, Figure 5.1.

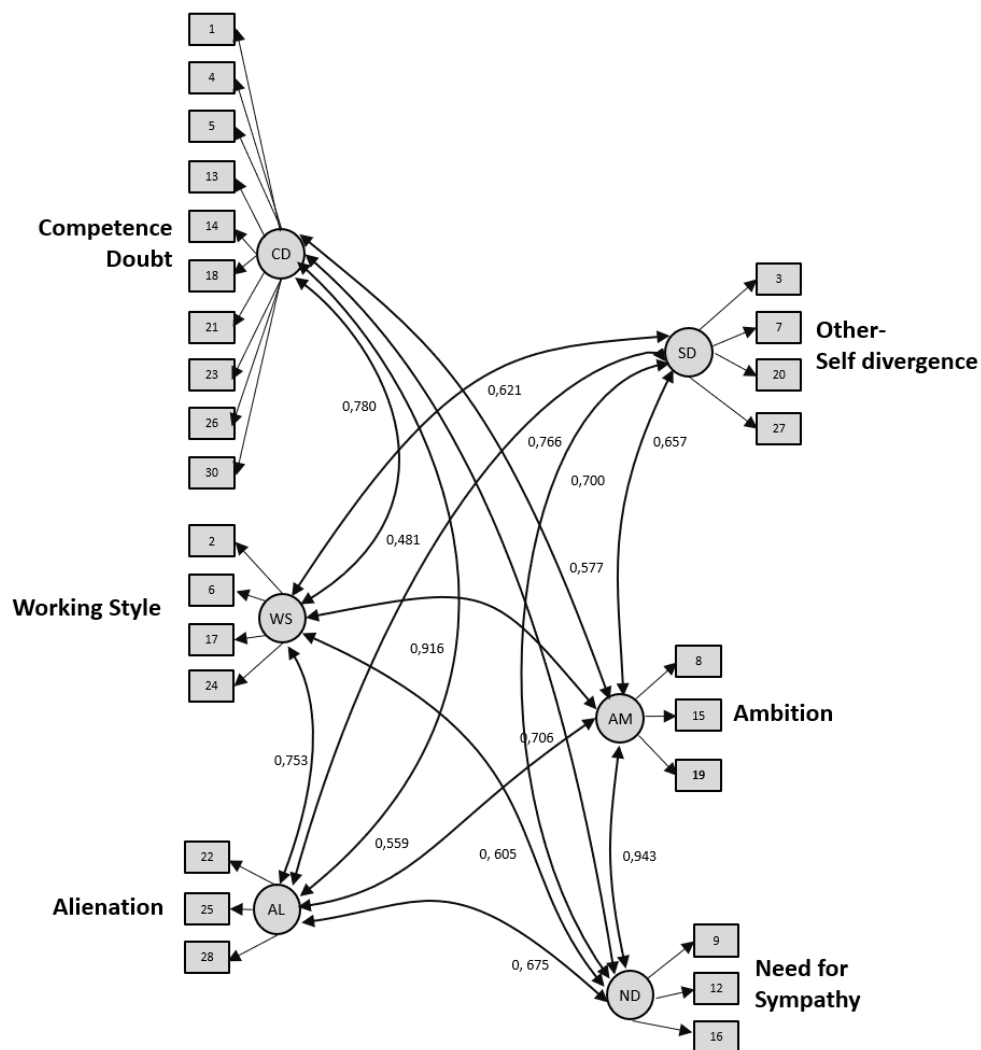


Figure 5.1: Correlations: IP Scale

Source: (Researcher's own)

The impostor scale's correlational values are presented in Table 5.9.

Table 5.9: Correlational Values: IP Scale

IMPOSTOR PHENOMENON			ESTIMATE
Competence Doubt	<-->	Working Style	.780
Competence Doubt	<-->	Alienation	.916
Competence Doubt	<-->	Other-Self Divergence	.819
Competence Doubt	<-->	Ambition	.577
Need for Sympathy	<-->	Competence Doubt	.706
Working Style	<-->	Alienation	.753
Working Style	<-->	Other-Self Divergence	.621
Working Style	<-->	Ambition	.481

IMPOSTOR PHENOMENON			ESTIMATE
Need for Sympathy	<-->	Working Style	.605
Alienation	<-->	Other-Self Divergence	.766
Other-Self Divergence	<-->	Alienation	.675
Alienation	<-->	Ambition	.559
Other-Self Divergence	<-->	Ambition	.657
IMPOSTOR PHENOMENON			ESTIMATE
Need for Sympathy	<-->	Ambition	.943
Need for Sympathy	<-->	Other-Self Divergence	.700

*p.001 for all correlations ** All estimates were statistically significant

The correlations of the model above range from .780 to .943, which were fairly high.

The model fit summary of the instrument for measuring the IP is presented below.

Table 5.10: Chi-Square Value (CMIN) of the IP Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	96	1400.151	309	.000	4.531

** All estimates were statistically significant

The Chi-square value of this model (CMIN = 4.531) represents a good model fit.

Table 5.11: Baseline Comparisons of the IP Model

Model	NFI Delta1	R FI rho1	IFI Delta2	TLI rho2	CFI
Default model	.855	.835	.883	.867	.883

** All estimates were statistically significant

The Comparative Fit Index (CFI = .883) is acceptable.

Table 5.12: Root Mean Square Error of Approximation of the IP Model

Model	Root Mean Square Error of Approximation	LO 90	HI 90	PCLOSE
Default model	.076	.072	.080	.000

** All estimates were statistically significant

The root mean square error of estimate of .076, with 90% CI [.072;.080], indicates a good fit.

Based on the standard regression weights, correlations of sub-indexes, Chi-square value, CFI and root mean square error presented in this section, the IP instrument used in this study is valid.

The validation of the self-esteem scale is as follows (Table 5.21):

5.4.3.2 Validity of instrument: Self-esteem

Table 5.13: Standardised Regression Weights: Self-Esteem Scale

SELF-ESTEEM			ESTIMATE
10. I take a positive attitude toward myself	<---	Self-Esteem	.709
9. All in all. I am inclined to feel that I am a failure.	<---	Self-Esteem	.711
8. I wish I could have more respect for myself.	<---	Self-Esteem	.507
7. I feel that I am a person of worth, at least on an equal plane with others.	<---	Self-Esteem	.529
6. I certainly feel useless at times.	<---	Self-Esteem	.736
5. I feel I do not have much to be proud of.	<---	Self-Esteem	.578
4. I am able to do things as well as most other individuals.	<---	Self-Esteem	.489
3. I feel that I have a number of good qualities	<---	Self-Esteem	.562
2. At times I think I am no good at all.	<---	Self-Esteem	.736
1. On the whole. I am satisfied with myself.	<---	Self-Esteem	.612

*, $p < 001$ For all estimates.

** All estimates were statistically significant

According to Table 5.13, the following items indicated the most important relationships: Item 6 ($p = .736$), item 2 ($p = .736$) and Item 9 ($p = .711$). The items with a lower indication of a relationship are item 7 ($p = .529$), item 8 ($p = .507$) and item 4 ($p = .489$). The correlations of these sub-areas are depicted in the illustration, Figure 5.2:

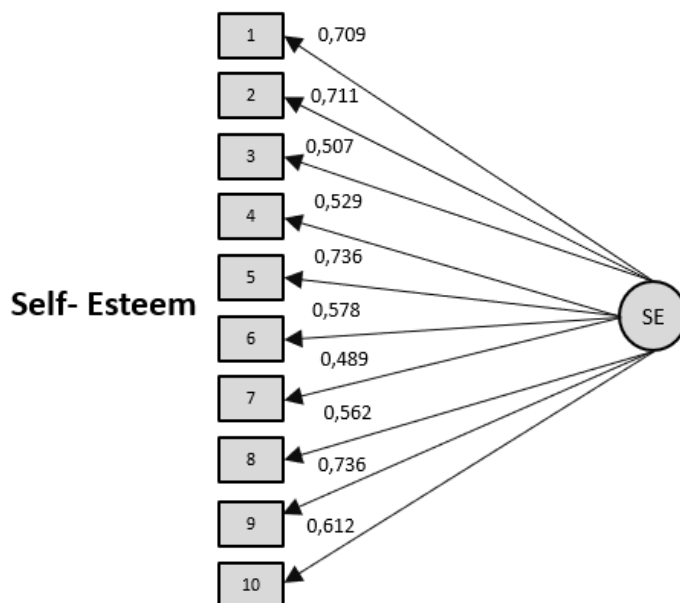


Figure 5.2: Factors: Self-Esteem Scale

Source: (Researcher's own)

The correlations of the model above range from .709 to .943. This indicates this model's validity.

The model fit summary of the instrument for measuring the IP is as follows:

Table 5.14: Chi-Square Value (CMIN) of the Self-esteem Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	30	448.370	35	.000	12.811

** All estimates were statistically significant

The Chi-square value of this model (CMIN = 12.811) represents a weak model fit

Table 5.15: Baseline Comparisons of the Self-Esteem Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.806	.751	.819	.766	.818

** All estimates were statistically significant

The Comparative Fit Index (CFI = .818) is acceptable.

Table 5.16: Root Mean Square Error of Approximation of the Self-esteem Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.139	.127	.150	.000

** All estimates were statistically significant

The root mean square error of estimate 139, with 90% CI [.127, .150], indicates a bad fit.

Based on the CFI and RMSEA presented in this section, the self-esteem instrument used did not show construct validity in this study, so further tests were conducted. Exploratory factor analysis (EFA) was used to confirm whether one factor represented the phenomenon's underlying theoretical framework. In the next section, the findings of this analysis are presented.

Table 5.17: KMO and Bartlett's Test: Self-Esteem Model

KMO AND BARTLETT'S TEST	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.875
Bartlett's Test of Sphericity	Approx. Chi-Square
	2299.968
	Df
	45
	Sig.
	.000

** All estimates were statistically significant

Bartlett's test of sphericity was statistically significant ($\chi^2 = 2299.968$; $DF = 45$; $p = .000$). Indicative of a sufficient correlation between variables to substantiate EFA. The KMO measure of sampling adequacy returned a value of .875, proving that the sample size was acceptable.

Table 5.18: Communalities: Self-Esteem Model Scale

	INITIAL	EXTRACTION
1. On the whole. I am satisfied with myself.	1.000	.452
2. At times, I think I am no good at all.	1.000	.574
3. I feel that I have a number of good qualities	1.000	.426
4. I am able to do things as well as most other individuals.	1.000	.339
5. I feel I do not have much to be proud of.	1.000	.397
6. I certainly feel useless at times.	1.000	.551
7. I feel that I am a person of worth, at least on an equal plane with others.	1.000	.360
8. I wish I could have more respect for myself.	1.000	.305
9. All in all. I am inclined to feel that I am a failure.	1.000	.533
10. I take a positive attitude toward myself	1.000	.550
Extraction Method: Principal Component Analysis.		

** All estimates were statistically significant

As seen in Table 5.18, the factor loadings ranged from .452 to .574, Indicating a loading $>.3$, which can be considered sufficient (Fidell & Tabachnick, 2003).

The EFA results determined that one extracted component explained 44.864% of the total variance; therefore, considering the RMSEA, the KMO and Bartlett's Test and the total variance, factor analysis can be accepted as valid.

Table 5.19: Component Matrix: Self-Esteem Scale

COMPONENT MATRIX	COMPONENT 1
2. At times, I think I am no good at all.	.758
6. I certainly feel useless at times.	.742
10. I take a positive attitude toward myself	.741
9. All in all. I am inclined to feel that I am a failure.	.730
1. On the whole. I am satisfied with myself.	.672
3. I feel that I have a number of good qualities	.653
5. I feel I do not have much to be proud of.	.630
7. I feel that I am a person of worth, at least on an equal plane with others.	.600
4. I am able to do things as well as most other individuals.	.582
8. I wish I could have more respect for myself.	.553
Extraction Method: Principal Component Analysis.	

*p.001 for all correlations

Based on the EFA, supported by Bartlett's test of sphericity and KMO measure of sampling adequacy presented in this section, the self-esteem instrument used in this study is valid.

5.4.3.3 Validity of instrument: Managerial Decision-Making Self-Efficacy

The validation of the MDMSE scale is as follows:

Table 5.20: Standardised Regression Weights: MDMSE Scale

MANAGERIAL DECISION-MAKING SELF-EFFICACY					ESTIMATE
15. Trust my own judgement and express my opinions firmly	<---	Thought Control	and	Affected	.775
9. Make difficult decisions under time pressure	<---	Thought Control	and	Affected	.621
8. Feel that I am making the right decisions	<---	Thought Control	and	Affected	.769
7. Know what to do next in decision-making	<---	Thought Control	and	Affected	.803
6. Remain confident to make sound judgements and the right choices	<---	Thought Control	and	Affected	.798
5. Contain my self-doubt about my ability to deal with adverse consequences	<---	Thought Control	and	Affected	.597
4. Refrain from worry about my decision choices and consequences	<---	Thought Control	and	Affected	.568
3. Limit negative thoughts entering my mind	<---	Thought Control	and	Affected	.543
2. Control my level of attention and concentration when time pressure mounts	<---	Thought Control	and	Affected	.602
1. Think clearly and keep all the relevant factors and information in mind	<---	Thought Control	and	Affected	.638
22. Manipulate quantitative data to identify trends, problems and their causes	<---	Analytical Efficacy	and	Inferential	.497
14. Refrain from changing my mind to the least objectionable alternative	<---	Analytical Efficacy	and	Inferential	.492
11. Analyse and interpret numerical/quantitative data accurately	<---	Analytical Efficacy	and	Inferential	.686
10. Use a methodical thinking process in my decisions.	<---	Analytical Efficacy	and	Inferential	.784
23. Choose the best alternatives given the situation	<---	Exploratory Search and Processing Efficacy			.827
27. Secure resources to implement my decisions	<---	Exploratory Search and Processing Efficacy			.696
12. Discover a range of alternatives/several solutions	<---	Exploratory Search and Processing Efficacy			.787
24. Persevere in my persuasive attempts to convince others of my decision choice	<---	Social Influence Efficacy			.759
25. Make decisions that contain risks and potentially unfavourable consequences	<---	Social Influence Efficacy			.566
26. Make decisions and persevere with actions to make them pay off	<---	Social Influence Efficacy			.681
28. Convince others of my decision choice even when opposition mounts	<---	Social Influence Efficacy			.822
16. Influence decisions with certainty that they will work	<---	Thought Control	and	Affected	.771
13. Weigh negative and positive consequences of each alternative option	<---	Exploratory Search and Processing Efficacy			.780

MANAGERIAL DECISION-MAKING SELF-EFFICACY			ESTIMATE
18. Appraise a business decision problem situation quickly	<---	Exploratory Search and Processing Efficacy	.780
19. Search for new information and alternatives	<---	Exploratory Search and Processing Efficacy	.728
20. Obtain information by seeing what needs to be known	<---	Exploratory Search and Processing Efficacy	.749
21. Narrow down list of alternatives that appear as effective options	<---	Exploratory Search and Processing Efficacy	.692
29. Influence decisions regardless of the amount of control I have over organisational constraints	<---	Social Influence Efficacy	.754
30. Refrain from putting off difficult decisions	<---	Social Influence Efficacy	.456
17. Readily commit to my decisions	<---	Thought and Affected Control	.733

** All estimates were statistically significant. We can reject the null hypothesis and conclude that the alternative hypothesis is correct if the p-value of the hypothesis test is less than a certain threshold of significance (for example. $p = .001$).

* $p = .001$ for all correlations

According to Table 5.20, the following items indicated the most substantial relationship: Item 23, Exploratory Search and Processing Efficacy ($p = .827$); Item 28, Social Influence Efficacy ($p = .822$) and Item 7 ($p = .803$), Thought and affect control. The items with a lower indication of relationship are item 22, Analytical and inferential efficacy ($p = .497$); item 14, Analytical and Inferential Efficacy ($p = .492$) and item 30, Social Influence Efficacy ($p = .456$). The correlations of these sub-areas are depicted in Figure 5.3 below:

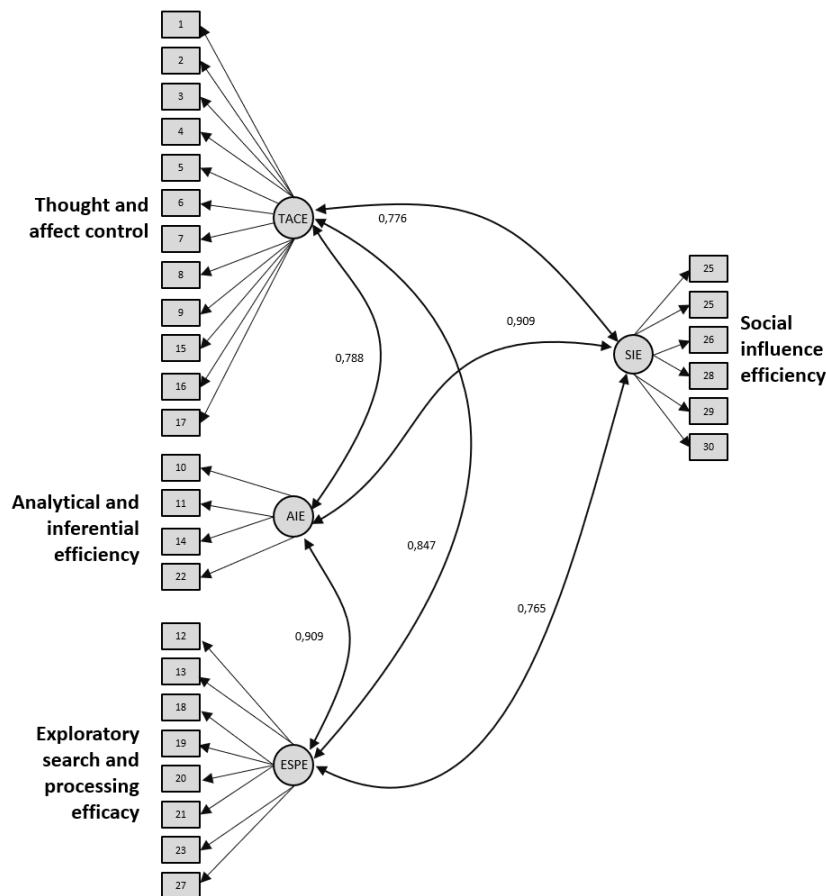


Figure 5.3: Correlations: MDMSE Scale

Source: (Researcher's own)

Table 5.21: Correlations: MDMSE Scale

			ESTIMATE
Thought and Affected Control	<-->	Analytical and Inferential Efficacy	.788
Thought and Affected Control	<-->	Exploratory Search and Processing Efficacy	.847
Social Influence Efficacy	<-->	Thought and Affected Control	.776
Analytical and Inferential Efficacy	<-->	Exploratory Search and Processing Efficacy	.909
Social Influence Efficacy	<-->	Analytical and Inferential Efficacy	.659
Social Influence Efficacy	<-->	Exploratory Search and Processing Efficacy	.765

*We can reject the null hypothesis and conclude that the alternative hypothesis is correct if the p-value of the hypothesis test is less than a certain threshold of significance (for example. $p = .001$). * $p < .001$ for all correlations** All estimates were statistically significant

As seen in Table 5.21 above, the correlations of the model range from .78 to .736. which indicates the validity of this model. The model fit summary of the instrument for measuring MDMSE is as follows:

Table 5.22: Chi-Square Value (CMIN) of the Managerial Decision-Making Self-Efficacy Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	96	2000.227	399	.000	5.013

** All estimates were statistically significant

The Chi-square value of this model (CMIN =.5013) represents a good model fit.

Table 5.23: Baseline Comparisons of the Managerial Decision-Making Self-Efficacy Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.825	.809	.855	.841	.854

** All estimates were statistically significant

The Comparative Fit Index (CFI =.854) is acceptable.

Table 5.24: Root Mean Square Error of Approximation of the Managerial Decision-Making Self-Efficacy Model

Model	Root Mean Square Error of Approximation	LO 90	HI 90	PCLOSE
Default model	.081	.077	.084	.000

** All estimates were statistically significant

The root mean square error of the estimate of .081, with 90% CI [.077; .084], indicates a good fit.

Based on the standard regression weights, correlations of sub-index, Chi-square value CFI and root mean square error presented in this section; the Managerial Decision-Making Self-Efficacy instrument used in this study is valid.

5.4.3.4 Validity of instrument: Innovative Work Behaviour

The validation of the IWB scale is as follows (Table 5.25):

Table 5.25: Standardised Regression Weights: Innovative Work Behaviour Scale

INNOVATIVE WORK BEHAVIOUR			ESTIMATE
4. I discuss with my colleagues or supervisors the possible opportunities to change work patterns to achieve better results	<---	Opportunity Exploration	.884
3. I share ideas with my colleagues or supervisors about the opportunities to find solutions to the problems we face at work	<---	Opportunity Exploration	.937
2. I share ideas with my colleagues or supervisors about opportunities for the development of working methods within the organisation	<---	Opportunity Exploration	.924
1. I am able to develop ideas and solutions for creative opportunities in my field	<---	Opportunity Exploration	.821

INNOVATIVE WORK BEHAVIOUR			ESTIMATE
8. I share ideas about concrete changes at work with colleagues	<---	Idea generation	.891
6. I am able to express personal opinions about basic problems in the workplace	<---	Idea generation	.740
7. I discuss personal ideas for work improvement with colleagues	<---	Idea generation	.787
5. I propose new ideas for development within the organisation	<---	Idea generation	.767
12. I promote supervisors' new ideas	<---	Idea Promotion	.828
11. I propose the new idea to key individuals authorised to allocate resources to this new idea	<---	Idea Promotion	.799
10. I am able to convince others of the importance of an improved idea or a new solution	<---	Idea Promotion	.789
16. Testing solutions for unexpected problems that arise when ideas are put into practice	<---	Idea realisation	.779
17. Analysing solutions arising from unwanted effects, when putting ideas into practice	<---	Idea realisation	.833
18. Monitoring progress during the process of putting ideas into practice	<---	Idea realisation	.855
19. Identifying the criteria for success to achieve or to realise the new idea	<---	Idea realisation	.857
24. Engaging with colleagues to further develop the idea	<---	Idea Sustainability	.887
23. Comparing the results of the proposed ideas with the original predetermined goals	<---	Idea Sustainability	.837
25. Initiating collaboration with other groups in the organisation to apply the new idea in other contexts as well	<---	Idea Sustainability	.825
9. I suggest improvements to ideas expressed by colleagues or bosses at work	<---	Idea generation	.874
13. I promote colleagues' new ideas	<---	Idea Promotion	.890
14. Refrain from changing my mind to the least objectionable alternative	<---	Idea Promotion	.889
15. I illustrate how the new idea can be applied gradually and practically to others	<---	Idea Promotion	.839
20. Keeping colleagues informed about progress in achieving the idea	<---	Idea realisation	.791
21. Critical thinking about the procedures that are followed when putting the idea into practice	<---	Idea realisation	.833
22. Designing practical (operational) strategies for similar future situations	<---	Idea realisation	.807
26. Discussing with colleagues how to consolidate ideas that have been implemented more strongly in the organisation's system	<---	Idea Sustainability	.816
27. Awareness of the steps that can be taken to make the implementation of the proposed idea a success	<---	Idea Sustainability	.810

** All estimates were statistically significant

*p.001 for all correlations

According to Table 5.25, the following items indicated the most vital relationship: item 3, *Opportunity Exploration* ($p = .937$); item 2, *Opportunity Exploration* ($p = .924$) and item 8, *idea generation* ($p = .891$). The items with a lower indication of relationship are item 16, *Idea realisation* ($p = .779$), item 5, *idea generation* ($p = .767$) and item 6, *idea generation* ($p = .740$). The correlations of these sub-areas are depicted in Figure 5.4 below:

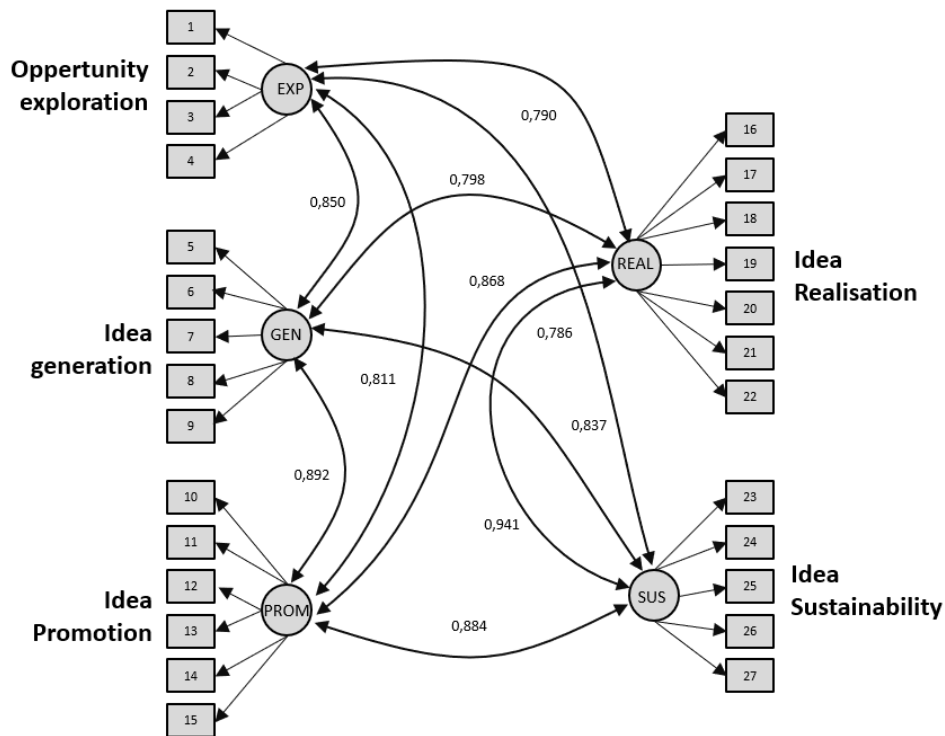


Figure 5.4: Correlational values: Innovative Work Behaviour Scale

Source: (Researcher's own)

Table 5.26: Correlational values: Innovative Work Behaviour Scale

			Estimate
Opportunity Exploration	<-->	Idea generation	.850
Opportunity Exploration	<-->	Idea Promotion	.811
Opportunity Exploration	<-->	Idea realisation	.790
Idea Sustainability	<-->	Opportunity Exploration	.786
Idea generation	<-->	Idea Promotion	.892
Idea generation	<-->	Idea realisation	.798
Idea Sustainability	<-->	Idea generation	.837
Idea Promotion	<-->	Idea realisation	.868
Idea Sustainability	<-->	Idea Promotion	.884
Idea Sustainability	<-->	Idea realisation	.941

*We can reject the null hypothesis and conclude that the alternative hypothesis is correct if the p-value of the hypothesis test is less than a certain threshold of significance (for example. $p = .001$). ** All estimates were statistically significant * $p.001$ for all correlations

The correlations of the model above range from .788 to .909. which indicates the validity of this model. The model fit summary of the instrument for measuring innovative work behaviour is as follows:

Table 5.27: Chi-Square Value (CMIN) of the Innovative Work Behaviour Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	91	1662.000	314	.000	5.293

** All estimates were statistically significant

The Chi-square value of this model (CMIN = 5.293) represents a good model fit.

Table 5.28: Baseline Comparisons of the Innovative Work Behaviour Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.904	.892	.920	.911	.920

** All estimates were statistically significant

The Comparative Fit Index (CFI = .920) is acceptable.

Table 5.29: RMSEA of the Innovative Work Behaviour Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.084	.080	.088	.000

** All estimates were statistically significant

The root mean square error of estimate of .084, with 90% CI [.080;.088], indicates a good fit.

Based on the standard regression weights, correlations of sub-indexes, χ^2 value, CFI and root mean square error presented in this section, the innovative work instrument used in this study is valid.

5.5 COMPARISON OF THE MEAN SCORES OF THE IMPOSTOR PHENOMENON, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY, AND INNOVATIVE WORK BEHAVIOUR BETWEEN GENDER, AGE GROUPS, MANAGERIAL LEVELS AND SECTORS.

In this section, the mean scores of the IP, self-esteem, decision-making self-efficacy and IWB between gender, age groups, managerial levels and sectors are compared using a comparison of means analyses for nominal data.

A non-random, convenience sample was used in this study and may not represent the larger population. As a result, generalising findings from a non-random sample to the larger population is problematic and can lead to biased or inaccurate conclusions. Non-random samples can be biased in many ways, such as through self-selection, convenience sampling or purposive sampling. These sampling techniques can lead to over-representation or under-representation of

certain groups or characteristics within the sample, which can limit the generalisability of the findings (Trochim, 2006).

Effect sizes can quantify the magnitude of differences or relationships observed in a sample. However, the extent to which effect sizes can be generalised to a larger population depends on various factors. One of the main limitations of effect sizes is that they are sample-dependent and can be influenced by the characteristics of the specific sample studied. For example, effect sizes may vary depending on the age, gender, race or other demographic characteristics of the participants in the study. Furthermore, effect sizes can also be influenced by the specific measures and instruments used to assess the variables of interest and the statistical methods used to calculate the effect sizes (Sullivan & Feinn, 2012).

Spearman's rank correlation coefficient (ρ ; ρ) can be used in t-tests to determine whether there is a significant correlation between two variables in a sample. Effect sizes in ρ t-tests are typically measured using ρ , which ranges from -1 to +1 and indicates the strength and direction of the monotonic relationship between the two variables. A significant effect size (i.e., a correlation coefficient close to -1 or +1) indicates a strong relationship between the two variables. In contrast, a small effect size (i.e., a correlation coefficient close to 0) indicates a weak or non-existent relationship (Cumming, 2013).

In addition to ρ , other effect size measures that can be used in correlation t-tests include Cohen's d , which compares the means of two groups and indicates the magnitude of the difference, and eta-squared (η^2), which indicates the proportion of variance in the dependent variable that is accounted for by the independent variable (Cohen *et al.*, 2013)

Effect sizes are essential in ρ t-tests because they provide additional information beyond the p-value, indicating the probability of obtaining the observed results by chance. Effect sizes help to determine the practical significance of the relationship between the variables and can be used to compare the strength of the relationship across different studies or populations (Rosenthal *et al.*, 1994).

As discussed, in Section 4.9, Data analysis, ρ , t-tests and Cohen's d were used to support the findings for research objective 3: The differences in the mean scores of the IP, self-esteem, decision-making self-efficacy and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.

5.5.1 Results of Spearman Rank-Order Correlations for Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/leadership Role With Constructs

Nonparametric analyses are typically used in datasets where the data does not match a normal distribution. Spearman rank-order correlation, or rank-ordinal correlation, is a quantitative statistical method for determining the connection between two ordinal variables. Rank-ordinal correlations were used to compare the mean scores of ages, highest qualification, managerial/leadership experience, and managerial/leadership role datasets with constructs within this study. The findings are as follows:

5.5.1.1 Results of Spearman rank-order correlations for IP with age, highest qualification, managerial/leadership experience, and managerial/leadership role

Table 5.30: Rank-order Correlations for IP with Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/Leadership Role

FACTOR		AGE	HIGHEST QUALIFICATION	MANAGERIAL /LEADERSHIP EXPERIENCE	MANAGERIAL/ LEADERSHIP ROLE
<i>Impostor scale</i>		-.166**	-.002	-.169**	-.079*
1- CD	Competence Doubt	-.160**	-.004	-.185**	-.099*
2- WS	Working Style	-.150**	.014	-.129**	-.030
3- AL	Alienation	-.134**	.001	-.159**	-.087*
4- SD	Other-Self Divergence	-.143**	-.020	-.130**	-.141**
5- AM	Ambition	-.074	.006	-.022	.035
6- ND	Need for Sympathy	-.094*	.073	-.086*	.002

*. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

Age and the *IP* ($p = -.166$) have a significant correlation at the 0.05 level. This is an inverted relationship. Thus, the factors presented a low index when the respondent's age was higher. Age had a small correlation at the 0.05 level for the Need for Sympathy ($p = -.094$). Age also had a significant correlation with the factors, Alienation ($p = -.134$), Other-Self Divergence ($p = -.143$), Working Style ($p = -.150$), and Competence Doubt ($p = -.160$). These correlations are significant at the 0.01 level. This indicates a small relationship between age and these constructs.

Highest Qualification: There is no significant correlation between the highest qualification of respondents and the *IP* ($p = -.002$). All factors indicated that there is no relationship: Alienation ($p = .001$), Competence Doubt ($p = -.004$), Ambition ($p = .006$), Working Style ($p = .014$), Other-Self Divergence ($p = -.020$) and Need for Sympathy, ($p = .073$).

Managerial/leadership experience and the IP ($p = -.169$) are correlated at the 0.01 level. There is no correlation between experience and Ambition ($p = -.022$). Their correlation is significant at 0.05 between experience and the Need for Sympathy ($p = -.086$). There is a significant correlation (significant at the 0.01 level) for the factors. Working Style ($p = -.129$), Other-Self Divergence ($p = -.130$), Alienation ($p = -.159$) and Competence Doubt ($p = -.185$). This indicates a small relationship between managerial/leadership experience and the constructs.

Managerial/leadership role indicated a significant correlation (at the 0.05 level) with the IP ($p = -.079$). There is no correlation between role and the factors Need for Sympathy ($p = .002$), Working Style ($p = -.030$) and Ambition ($p = .035$). Furthermore, there is a significant correlation (at 0.05 level) between the factors, Alienation ($p = -.087$) and Competence Doubt ($p = -.099$). Moreover, there is a correlation significance at the 0.01 level for the Other-Self Divergence factor ($p = -.141$). This indicates a slight relationship between managerial/leadership roles and these constructs. The correlational results for self-esteem, age, highest qualification, managerial/leadership experience, and managerial/leadership role will be presented in the next section.

5.5.1.2 Results of Spearman rank-order correlations for Self-esteem age, highest qualification, managerial/leadership experience, and managerial/leadership role

Table 5.31: Rank-order Correlations for IP with Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/Leadership Role

FACTOR	AGE	HIGHEST QUALIFICATION	MANAGERIAL /LEADERSHIP EXPERIENCE	MANAGERIAL/ LEADERSHIP ROLE
<i>Self-esteem scale</i>	-.267**	-.140**	-.280**	-.220**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

There is a significant correlation (at the 0.01 level) between self-esteem and age ($p = -.267$), Highest qualification ($p = -.140$), managerial/leadership experience ($p = -.280$) and managerial/leadership role ($p = -.220$). This indicates that self-esteem has a small relationship with these factors. The correlational results for managerial decision-making self-efficacy, age, highest qualification, managerial/leadership experience, and managerial/leadership role are presented in the next section.

5.5.1.3 Results of Spearman Rank-order Correlations Managerial Decision-Making Self-Efficacy age, highest qualification, managerial/leadership experience, and managerial/leadership role

Table 5.32: Rank-Order Correlations Managerial Decision-Making Self-Efficacy, Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/Leadership Role

FACTOR		AGE	HIGHEST QUALIFICATION	MANAGERIAL /LEADERSHIP EXPERIENCE	MANAGERIAL/ LEADERSHIP ROLE
MDMSEQ scale		.233**	.135**	.300**	.267**
1- AIE	Analytical and Inferential Efficacy	.157**	.176**	.186**	.221**
2- ESPE	Exploratory Search and Processing Efficacy	.177**	.135**	.214**	.208**
3- SIE	Social Influence Efficacy	.191**	.124**	.270**	.242**
4- TACE	Thought and Affected Control	.244**	.092*	.305**	.265**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

There is a significant correlation between age and Managerial Decision-Making Self-Efficacy ($p = .233$). Furthermore, correlation is significant at the 0.01 level following factors: Analytical and Inferential Efficacy ($p = .157$), Exploratory Search and Processing Efficacy ($p = .177$), Social Influence Efficacy ($p = .191$), MDMSEQ scale ($p = .233$) and Thought and Affected Control ($p = .244$). This indicates a small to medium relationship between age and the constructs.

A significant correlation exists between the highest qualification and Managerial Decision-Making Self-Efficacy ($p = .233$). A highly significant correlation is significant (at the 0.01 level) can be seen for the Social Influence Efficacy ($p = .124$), MDMSEQ scale ($p = .135$), Exploratory Search and Processing Efficacy ($p = .135$), and Analytical and Inferential Efficacy ($p = .176$) factors. There is also a significant correlation (at the 0.05 level for the factor Thought and Affected Control ($p = .092$)). This indicates a small to medium relationship between the highest qualification and the constructs.

There is a significant correlation between managerial/ leadership experience and managerial decision-making self-efficacy ($p = .300$). There is furthermore a high correlation (0.01 level) for factors, Analytical and Inferential Efficacy ($p = .186$), Exploratory Search and Processing Efficacy ($p = .214$), Social Influence Efficacy, ($p = .270$), and Thought and Affected Control ($p = .305$). This indicates a small to medium relationship between managerial/leadership experience and the constructs.

There is a significant correlation between managerial/ leadership roles and managerial decision-making self-efficacy ($p = .267$). There is furthermore a high correlation (0.01 level) for factors, Exploratory Search and Processing Efficacy ($p = .208$), Analytical and Inferential Efficacy ($p = .221$), Social Influence Efficacy ($p = .242$) and Thought and Affected Control ($p = .265$). This indicates a small relationship between managerial/leadership roles and the constructs. The correlational results for IWB, age, highest qualification, managerial/leadership experience, and managerial/leadership role are presented in the next section.

5.5.1.4 Results for Spearman correlations for Innovative Work behaviour with age, highest qualification, managerial/leadership experience, and managerial/leadership role

Table 5.33: Correlations for Innovative Work Behaviour with Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/Leadership Role

FACTOR		AGE	HIGHEST QUALIFICATION	MANAGERIAL /LEADERSHIP EXPERIENCE	MANAGERIAL/ LEADERSHIP ROLE
IWB scale		.217**	.093*	.213**	.172**
1- EXP	Opportunity Exploration	.151**	.066	.135**	.142**
2- GEN	Idea Generation	.232**	.115**	.223**	.182**
3- PROM	Idea Promotion	.226**	.086*	.226**	.222**
4- REAL	Idea Realisation	.158**	.106**	.164**	.116**
5- SUS	Idea Sustainability	.160**	.031	.152**	.095*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

There is a significant correlation between age and IWB ($p = .217$). There is a significant correlation (at the 0.01 level) for the factors Opportunity Exploration ($p = .151$), Idea Realisation ($p = .158$), Idea Sustainability ($p = .160$), Idea Promotion ($p = .226$) and idea generation ($p = .232$). This indicates a small relationship between age and the constructs.

A significant correlation exists between the highest qualification and IWB ($p = .093$). These values show no correlation between Idea Sustainability ($p = .031$) and Opportunity Exploration ($p = .066$). There is a significant correlation (at the 0.05 level) between the factors Idea Promotion ($p = .086$) and the IWB scale ($p = .093$). There is a significant correlation (at the 0.01 level) between Idea Realisation ($p = .106$) and idea generation ($p = .115$). This indicates a small relationship between the highest qualification and the constructs.

A significant correlation exists between managerial/leadership experience and IWB ($p = .213$). Correlations are significant at the 0.01 level for the factors, Opportunity Exploration ($p = .135$), Idea Sustainability ($p = .152$), Idea Realisation ($p = .164$), idea generation ($p = .223$) and Idea Promotion ($p = .226$). This indicates a small relationship between managerial/leadership experience and the constructs.

There is a significant correlation between the highest qualification and IWB ($p = .172$); there is a significant correlation (0.05 level) for the factor Idea Sustainability. Correlation is highly significant at the 0.01 level for factors Idea Realisation ($p = .116$), Opportunity Exploration ($p = .142$), idea generation ($p = .182$) and Idea Promotion ($p = .222$). This indicates a small relationship between managerial/leadership roles and the constructs.

Social science research includes nominal variables or nonparametric statistics. Since no presumptions are made when using nonparametric statistics, data can be gathered from samples that do not fit any distribution. In the next section, the results for gender and sector are presented.

5.5.2 Results of Spearman Rank-order Correlations for Gender

Most of the sample for this research was male ($n = 342$; 55.5%), while 43.8% representing 270 respondents, were female. Additionally, .6% of the sample representing four respondents selected others. The small sample of the .6%, representing other, were not included in this t-test as the small sample have no representative.

5.5.2.1 Results of Spearman rank-order correlations for IP with Gender

Table 5.34: Rank-Order Correlations for IP with Gender

			N	MEAN	STD. DEVIATIO N	T-TEST P-VALUE	COHEN'S D
Impostor scale		Male	342	37.13	18.18	.473**	-.06
		Female	270	38.24	19.50		
1- CD	Competence Doubt	Male	342	32.89	21.81	.169**	-.11
		Female	270	35.43	23.27		
2- WS	Working Style	Male	342	33.24	25.28	.819**	-.02
		Female	270	33.72	26.37		
3- AL.	Alienation	Male	342	37.65	21.33	.818**	.02
		Female	270	37.25	21.74		
4- SD	Other-Self Divergence	Male	342	31.37	20.27	.435**	-.06
		Female	270	32.70	21.61		
5-AM	Ambition	Male	342	51.83	21.60	.428**	.07
		Female	270	50.38	23.11		

6-ND	Need for Sympathy	Male	342	48.91	21.34	.607**	-.04
		Female	270	49.84	22.93		

** All estimates were statistically significant

In this t-test, men represent 55.88 ($n = 342$), while woman represents 44.12% ($n = 270$) of the sample in this test. The IP scores range from a minimum of 0 to a maximum of 100. Based on Table 5.34, there were not statistically or practically significant differences.

5.5.2.2 Results of Spearman rank-order correlations for Self-esteem, Gender

Table 5.35: Rank-order Correlations for Self-esteem, Gender

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
Self-esteem scale	Male	342	18.20	5.58	.037	-.17
	Female	270	19.18	5.87		

** All estimates were statistically significant

The participants had scores ranging from 10 to 40. The minimum score of 10 suggests that individuals in the sample had low self-esteem, while the maximum score of 40 indicates that some individuals may have high self-esteem.

The average self-esteem score is within the middle range of the possible scores and suggests that, on average, participants had moderate self-esteem. Table 5.35 shows Cohen's $d = -.17$, which these criteria define as small. Self-esteem had a more significant impact on the female sample ($M = 19.18$, $SD = 5.87$) than the male ($M = 18.20$, $SD = 5.58$). The t- t-value indicated a score of .037, while Cohen's d-test indicated a score of -.17. This results in a p-value of .037, below the defined significance level of 5%.

5.5.2.3 Results for Spearman rank-order correlations managerial decision-making self-efficacy, gender

Table 5.36: Rank-Order Correlations: Managerial Decision-Making Self-Efficacy, Gender

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
MDMSEQ scale	Male	342	80.20	9.56	.006	.23
	Female	270	77.92	10.71		
1- AIE	Analytical and Inferential Efficacy	Male	342	78.79	.058	.16
		Female	270	76.91		
2- ESPE	Exploratory Search and Processing Efficacy	Male	342	83.44	.051	.16
		Female	270	81.69		

3- SIE	Social Influence Efficacy	Male	342	76.54	12.04	.023	.19
		Female	270	74.14	13.53		
4- TACE	Thought and Affected Control	Male	342	80.34	10.64	.003	.24
		Female	270	77.64	11.68		

** All estimates were statistically significant

The Managerial Decision-Making Self-Efficacy scores range from a minimum of 25 to a maximum of 100. The mean score for the MDMSE indicates that, on average, participants had relatively high MDMSE skills. The table displays Cohen's $d = .23$, which these criteria define as small. The Managerial Decision-Making Self-Efficacy construct had a more significant impact on the male sample ($M = 80.20$, $SD = 9.56$) than the female ($M = 77.92$, $SD = 10.71$). The t-p value indicated a score of .006, while Cohen's d-test indicated a score of .23. This results in a p-value of .006, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

The higher mean in the Analytical and Inferential Efficacy score indicates that participants may struggle with logical reasoning and problem-solving. The table displays Cohen's $d = .16$, which these criteria define as small. The managerial decision-making self-efficacy construct, Analytical and Inferential Efficacy had a more significant impact on the male sample ($M = 78.79$, $SD = 11.51$) than female ($M = 76.91$, $SD = 12.71$). The t-p value indicated a score of .058, while Cohen's d-test indicated a score of .16. This results in the p-value of .058, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The relatively high mean scores for Exploratory Search and Processing Efficacy suggest that participants engage in creative thinking. The table displays Cohen's $d = .24$, which these criteria define as small. The managerial decision-making self-efficacy construct, Exploratory Search and Processing Efficacy had a more significant impact on the male sample ($M = 83.44$, $SD = 10.32$) than the female ($M = 81.69$, $SD = 11.42$). The t-p value indicated a score of .003, while Cohen's d-test indicated a score of .24. This results in the p-value of .003, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

The mean score for Social Influence Efficacy suggests that participants could persuade and influence others. The table displays Cohen's $d = .19$, which these criteria define as small. The managerial decision-making self-efficacy construct, Social Influence Efficacy, had a more significant impact on the male sample ($M = 74.54$, $SD = 12.04$) than female ($M = 74.14$, $SD = 13.53$). The t-p value indicated a score of .023, while Cohen's d-test indicated a score of .19. This

results in the p-value of .023, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

The relatively high mean scores for Thought and Affect Control suggest that participants could manage their emotions. The table displays Cohen's $d = .24$, which these criteria define as small. The managerial decision-making self-efficacy construct, Social Influence Efficacy, had a more significant impact on the male sample ($M = 80.34$, $SD = 10.64$) than the female ($M = 77.64$, $SD = 11.68$). The t-p value indicated a score of .003, while Cohen's d-test indicated a score of .24. This results in the p-value of .003, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

5.5.2.4 Results of Spearman rank-order correlations of innovative work behaviour, gender

Table 5.37: Rank-Order Correlations: Innovative Work Behaviour, Gender

			N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
IWB scale		Male	342	4.07	.73	.281	.09
		Female	270	4.01	.74		
1- EXP	Opportunity Exploration	Male	342	4.20	.85	.621	.04
		Female	270	4.16	.88		
2- GEN	Idea Generation	Male	342	4.08	.82	.313	.08
		Female	270	4.01	.82		
3- PROM	Idea Promotion	Male	342	4.06	.80	.294	.09
		Female	270	3.99	.81		
4- REAL	Idea Realisation	Male	342	4.03	.75	.138	.12
		Female	270	3.94	.76		
5- SUS	Idea Sustainability	Male	342	4.03	.82	.512	.05
		Female	270	3.98	.80		

** All estimates were statistically significant

The IWB scores range from a minimum of 1 to a maximum of 100. The table displays Cohen's $d = .09$, which these criteria define as small. The descriptive statistics for this study's five factors of IWB participants were, on average, moderately engaged in each stage. The IWB construct had a more significant impact on the male sample ($M = 7.07$, $SD = .73$) than the female ($M = 4.01$, $SD = .74$). The t-p value indicated a score of .281. In contrast, Cohen's d-test indicated a score of .09. This results in a p-value of .281, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The mean score for Opportunity Exploration indicates that participants tended to explore opportunities for innovation moderately. The innovative work behaviour construct, Opportunity Exploration, had a more significant impact on the male sample ($M = 4.20$, $SD = .85$) than the female ($M = 4.16$, $SD = .88$). The t-p value indicated a score of .621. In contrast, Cohen's d-test indicated a score of .04. This results in a p-value of .621, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .04$, which these criteria define as small.

The mean score for idea generation indicates that participants tended to generate ideas moderately. The IWB construct, idea generation, had a more significant impact on the male sample ($M = 4.08$, $SD = .82$) than the female ($M = 4.01$, $SD = .82$). The t-p value indicated a score of .313. In contrast, Cohen's d-test indicated a score of .08. This results in a p-value of .319, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .08$, which these criteria define as small.

The mean score for Idea Promotion indicates that participants tended to promote ideas to a moderate extent. The IWB construct, Idea Promotion, had a more significant impact on the male sample ($M = 4.06$, $SD = .80$) than the female ($M = 3.99$, $SD = .81$). The t-p value indicated a score of .294. In contrast, Cohen's 't' test indicated a score of .09. This results in a p-value of .294, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .09$, which these criteria define as small.

The mean score for Idea realisation indicates that participants tended to realise ideas moderately. The IWB construct, Idea Realisation, had a more significant impact on the male sample ($M = 4.03$, $SD = .75$) than the female ($M = 3.94$, $SD = .76$). The t-p value indicated a score of .138. In contrast, Cohen's d-test indicated a score of .12. This results in a p-value of .138, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .12$, which these criteria define as small.

The mean score for Idea Sustainability indicates that participants tended to sustain ideas moderately. The IWB construct, the Idea of Sustainability, had a more significant impact on the male sample ($M = 4.03$, $SD = .82$) than the female ($M = 3.98$, $SD = .80$). The t-p value indicated

a score of .512. Cohen's d-test indicated a score of .05. This results in a p-value of .512, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's d = .05, which these criteria define as small.

5.5.3 Results of Spearman Rank-order Correlations per Sector

The sample was almost equally divided regarding the sector in which respondents were employed. 47.1% ($n = 290$) of the sample was employed in the public sector, while 52.9%, representing 326 respondents, were employed in the private sector.

5.5.3.1 Results of Spearman rank-order correlations IP, Sector

Table 5.38: Rank-order Correlations: IP, Sector

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
Impostor scale	Private Sector	326	40.02	18.70	.001	.26
	Public Sector	290	35.13	18.69		
1- CD	Competence Doubt	Private Sector	326	36.77	.002	.25
		Public Sector	290	31.07		
2- WS	Working Style	Private Sector	326	38.19	.000	.38
		Public Sector	290	28.50		
3- AL	Alienation	Private Sector	326	39.05	.066	.15
		Public Sector	290	35.85		
4- SD	Other-Self Divergence	Private Sector	326	31.23	.296	-.08
		Public Sector	290	33.01		
5-AM	Ambition	Private Sector	326	53.03	.044	.16
		Public Sector	290	49.38		
6-ND	Need for Sympathy	Private Sector	326	53.00	.000	.35
		Public Sector	290	45.34		

** All estimates were statistically significant

In this t-test, the private sector represents 52.92 ($n = 315$), while the public sector represents 47.08% ($n = 290$) of the sample in this test. The IP scores range from a minimum of 0 to a maximum of 100.

Participants reported a mean score indicating moderate impostor tendencies on the IP scale. The IP had a more significant impact on the private sector sample ($M = 40.2$, $SD = 18.70$) than the public sector ($M = 35.13$, $SD = 18.69$). The t-p value indicated a score of .001, while Cohen's d-test indicated a score of .23. This results in a p-value of .001, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus,

there is no equality in the sample. The table shows Cohen's $d = .23$, which these criteria define as small.

Participants reported a mean score indicating reasonable doubt in their abilities on this construct. The table displays Cohen's $d = .25$, which these criteria define as small. The IP construct, Competence Doubt, had a more significant impact on the private sector sample ($M = 36.70$, $SD = 22.91$) than the public sector sample ($M = 31.07$, $SD = 21.79$). The t-p value indicated a score of .002, while Cohen's d-test indicated a score of .25. This results in the p-value of .002, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

On the Working Style sub-scale, participants reported a mean score indicating a tendency towards perfectionism and overworking. The table shows Cohen's $d = .38$, which these criteria define as small. The IP construct, Working Style, had a more significant impact on the private sector sample ($M = 38.19$, $SD = 29.32$) than the public sector sample ($M = 24.22$, $SD = 21.79$). The t-p value indicated a score of .000, while Cohen's d-test indicated a score of .38. This results in a p-value of .000, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

On the Alienation sub-scale, participants reported a mean score indicating moderate feeling disconnected from others. The IP construct, Alienation, had a more significant impact on the private sector sample ($M = 39.05$, $SD = 21.49$) than the public sector sample ($M = 35.85$, $SD = 21.49$). The t-p value indicated a score of .066, while Cohen's d-test indicated a score of .15. This results in the p-value of .066, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .15$, which these criteria define as small.

On the Other-Self Divergence sub-scale, participants reported a mean score indicating moderate levels of feeling disconnected from their true selves. The t-p value indicated a score of .296, while Cohen's d-test indicated a score of -.08, which these criteria define as small. The IP construct, Other-Self Divergence, had a more significant impact on the private sector sample ($M = 33.01$, $SD = 20.65$) than the public sector sample ($M = 33.01$, $SD = 21.3$).

On the Ambition sub-scale, participants reported a mean score indicating moderate levels of determination. The IP construct, Ambition, had a more significant impact on the private sector sample ($M = 55.03$, $SD = 21.00$) than the public sector sample ($M = 49.38$, $SD = 23.47$). The t-p value indicated a score of .044, while Cohen's d-test indicated a score of -.16. This results in the

p-value of .044, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample. The table shows Cohen's $d = -.16$, which these criteria define as small.

Participants reported a mean score indicating a moderate need for external validation on the Need for Sympathy sub-scale. The table displays Cohen's $d = .35$, which these criteria define as small. The IP construct, Ambition, had a more significant impact on the private sector sample ($M = 53.00$, $SD = 21.50$) than the public sector sample ($M = 45.34$, $SD = 21.94$). The t-p value indicated a score of .000, while Cohen's d-test indicated a score of .35. This results in a p-value of .000, below the defined significance level of 5%. The Levene test is, therefore, significant, and the null hypothesis is not confirmed. Thus, there is no equality in the sample.

5.5.3.2 Results of Spearman rank-order Correlations for Self-esteem and Sector

Table 5.39: Rank-order Correlations: Self-Esteem, Sector

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
Self-esteem scale	Private Sector	326	18.74	5.99	.673	.03
	Public Sector	290	18.54	5.45		

** All estimates were statistically significant

The participants had scores ranging from 10 to 40. The minimum score of 10 suggests that individuals in the sample had low self-esteem, while the maximum score of 40 indicates that some individuals may have high self-esteem.

The average self-esteem score ranges are within the middle range of the possible scores and suggest that, on average, participants had moderate self-esteem. The table displays Cohen's $d = .03$, which these criteria define as small. Self-esteem had a more significant impact on the private sector sample ($M = 18.74$, $SD = 5.99$) than the public sector ($M = 18.54$, $SD = 5.45$). The t-p value indicated a score of .673, while Cohen's d-test indicated a score of .03. This results in a p-value of .675, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

5.5.3.3 Results of Spearman Rank-order Correlations Managerial Decision-Making Self-Efficacy, sector

Table 5.40: Rank-order Correlations: Managerial Decision-Making Self-Efficacy, Sector

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
MDMSEQ	Private Sector	326	79.67	9.78	.206	.10
	Public Sector	290	78.63	10.54		
1- AIE	Private Sector	326	78.71	12.29	.097	.13
	Public Sector	290	77.09	11.86		
2- ESPE	Private Sector	326	83.38	10.35	.079	.14
	Public Sector	290	81.83	11.37		
3- SIE	Private Sector	326	76.25	12.04	.120	.13
	Public Sector	290	74.64	13.48		
4- TACE	Private Sector	326	79.23	11.13	.804	.02
	Public Sector	290	79.01	11.30		

** All estimates were statistically significant

The MDMSE scores range from a minimum of 25 to a maximum of 100. The mean score for the MDMSE indicates that, on average, participants had relatively high MDMSE skills. The table displays Cohen's $d = .10$, which these criteria define as small. The MDMSE scale had a more significant impact on the private sector sample ($M = 79.67$, $SD = 9.78$) than the public sector ($M = 78.63$, $SD = 10.54$). The t-p value indicated a score of .206, while Cohen's d-test indicated a score of .10. This results in the p-value of .206, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The higher mean in Analytical and Inferential Efficacy scores indicates that participants may struggle with logical reasoning and problem-solving. The table displays Cohen's $d = .13$, which these criteria define as small. The MDMSE construct, Analytical and Inferential Efficacy had a more significant impact on the private sector sample ($M = 78.71$, $SD = 12.29$) than the public sector sample ($M = 77.09$, $SD = 11.86$). The t-p value indicated a score of .097, while Cohen's d-test indicated a score of .13. This results in the p-value of .097, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The relatively high mean scores for Exploratory Search and Processing Efficacy suggest that participants engage in creative thinking. The table displays Cohen's $d = .14$, which these criteria define as small. The MDMSE construct, Exploratory Search and Processing Efficacy had a more significant impact on the private sector sample ($M = 83.38$, $SD = 10.35$) than the public sector sample ($M = 81.83$, $SD = 11.37$). The t-p value indicated a score of .079, while Cohen's d-test indicated a score of .14. This results in the p-value of .079, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The mean score for Social Influence Efficacy suggests that participants could persuade and influence others. The table displays Cohen's $d = .13$, which these criteria define as small. The MDMSE construct, Social Influence Efficacy, had a more significant impact on the private sector sample ($M = 76.25$, $SD = 12.04$) than the public sector sample ($M = 74.64$, $SD = 13.48$). The t-p value indicated a score of .120 while Cohen's d-test indicated a score of .13. This results in the p-value of .120, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

The relatively high mean scores for Thought and Affect Control suggest that participants could manage their emotions. The table displays Cohen's $d = .02$, which these criteria define as small. The MDSME construct, Thought and Affected Control, had a more significant impact on the private sector sample ($M = 79.23$, $SD = 11.13$) than the public sector sample ($M = 79.01$, $SD = 11.30$). The t-p value indicated a score of .804, while Cohen's d-test indicated a score of .02. This results in the p-value of .804, above the defined significance level of 5%. Thus, there is equality in the sample. The Levene test is, therefore, not significant, and the null hypothesis is confirmed.

5.5.3.4 Results of Spearman Rank-order Correlations Innovative Work Behaviour, Sector

Table 5.41: Rank-Order Correlations: Innovative Work Behaviour, Sector

		N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
IWB scale	Private Sector	326	4.04	.72	.982	.00
	Public Sector	290	4.04	.75		
1- EXP	Opportunity Exploration	Private Sector	326	4.19	.837	.02
		Public Sector	290	4.18		
2- GEN	Idea Generation	Private Sector	326	4.05	.962	.00
		Public Sector	290	4.05		
3- PROM	Idea Promotion	Private Sector	326	4.03	.981	.00
		Public Sector	290	4.03		
4- REAL	Idea Realisation	Private Sector	326	3.99	.969	.00
		Public Sector	290	3.99		

			N	MEAN	STD. DEVIATION	T-TEST P-VALUE	COHEN'S D
5- SUS	Idea Sustainabil ity	Private Sector	326	4.01	.81	.892	-.01
		Public Sector	290	4.01	.82		

** All estimates were statistically significant

The IWB scores range from a minimum of 1 to a maximum of 100. The descriptive statistics for this study's five factors of IWB participants were, on average, moderately engaged in each stage. The IWB scale had a similar impact on respondents employed in the private sector sample (M = 4.04, SD = .72) and on respondents employed in the public sector (M = 4.04, SD = .75). The t-p value indicated a score of .982. In contrast, Cohen's d-test indicated a score of .00.

The mean score for Opportunity Exploration indicates that participants tended to explore opportunities for innovation moderately. The IWB construct, Opportunity Exploration, had a similar significant impact on respondents employed in the private sector sample (M = 4.19, SD = .83) and on respondents employed in the public sector sample (M = 4.18, SD = .90). The t-p value indicated a score of .837. In contrast, Cohen's d-test indicated a score of .02. This results in a p-value of .837, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's d = .02, which these criteria define as small.

The mean score for idea generation indicates that participants tended to generate ideas moderately. The IWB construct, idea generation had a similar significant impact on respondents employed in the private sector sample (M = 4.05, SD = .81) and on respondents employed in the public sector sample (M = 4.05, SD = .83). The t-p value indicated a score of .962. The Cohen's d test indicated a score of .00. This results in a p-value of .962, above the defined significance level of 5%. Thus, there is equality in the sample. The Levene test is, therefore, not significant, and the null hypothesis is confirmed.

The mean score for Idea promotion indicates that participants tended to promote ideas to a moderate extent. The IWB construct, Idea Promotion, had a similar significant impact on respondents employed in the private sector sample (M = 4.03, SD = .78) and on respondents employed in the public sector sample (M = 4.03, SD = .83). The t-p value indicated a score of .981. In contrast, Cohen's d-test indicated a score of .00. This results in a p-value of .981, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's d = .00, which these criteria define as small.

The mean score for Idea realisation indicates that participants tended to realise ideas moderately. The IWB construct, Idea Realisation, had a similar significant impact on the respondents employed in the private sector sample ($M = 3.99$, $SD = .74$) and on respondents employed in the public sector sample ($M = 3.99$, $SD = .77$). The t-p value indicated a score of .969. In contrast, Cohen's d-test indicated a score of .00. This results in a p-value of .969, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = .00$, which these criteria define as small.

The mean score for Idea Sustainability indicates that participants tended to sustain ideas moderately. The IWB construct, Idea Sustainability, had a similar significant impact on respondents employed in the private sector sample ($M = 4.01$, $SD = .81$) and on respondents employed in the public sector sample ($M = 4.01$, $SD = .82$). The t-p value indicated a score of .892. The Cohen's d test indicated a score of -.01. This results in a p-value of .892 above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. The table displays Cohen's $d = -0.1$, which these criteria define as small.

5.6 THE IMPACT OF THE IP ON DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR

5.6.1 Relationship between IP and Self-Esteem Construct

Table 5.42: Relationship between IP and Self-Esteem Construct

IMPOSTOR SCALE		SELF-ESTEEM SCALE
		.421**
1- CD	Competence Doubt	.513**
2- WS	Working Style	.353**
3- AL.	Alienation	.354**
4- SD	Other-Self Divergence	.351**
5- AM	Ambition	0.002
6- ND.	Need for Sympathy	.120**
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		
** All estimates were statistically significant		

The IP significantly impacts self-esteem ($r = .421$), but Table 5.42 above shows no correlation between self-esteem and Ambition ($r = 0.002$). There is a significant correlation (at the 0.01 level) between self-esteem and the following sub-constructs: Competence Doubt ($r = .513$), Alienation

($r = .354$), Working Style ($r = .353$), Other-Self Divergence ($r = .351$) and Need for Sympathy ($r = .120$). Self-esteem significantly affects a person's self-doubt, dread of failure, and maladaptive perfectionism because it significantly influences Competence Doubt ($r = 5.13$).

5.6.2 Relationship between IP and MDMSE Constructs

Table 5.43: Relationship between IP and MDMSE Constructs

	MDMSEQ SCALE	1- AIE ANALYTICAL AND INFERENTIAL EFFICACY	2- ESPE EXPLORATORY SEARCH AND PROCESSING EFFICACY	3- SIE SOCIAL INFLUENCE EFFICACY	4- TACE THOUGHT AND AFFECTED CONTROL
Impostor scale	-.360**	-.198**	-.236**	-.232**	-.454**
1- CD Competence Doubt	-.431**	-.239**	-.296**	-.290**	-.533**
2- WS Working Style	-.325**	-.169**	-.242**	-.203**	-.398**
3- AL. Alienation	-.279**	-.152**	-.175**	-.195**	-.349**
4- SD Other-Self Divergence	-.335**	-.233**	-.267**	-.220**	-.380**
5- AM Ambition	-.010	-.016	.034	.035	-.050
6- ND. Need for Sympathy	-.087*	.018	.010	-.046	-.179**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

The IP significantly impacts MDMSE ($p = -.360$). There is no correlation between MDMSE and Ambition ($p = -.010$). Correlation is significant at the 0.05 level for the following constructs: Need for Sympathy ($p = -.087$), Alienation ($p = -.279$), Working Style ($p = -.325$), Other-Self Divergence ($p = -.335$), Impostor scale ($p = -.360$) and Competence Doubt ($p = -.431$).

The IP significantly impacts the Analytical and Inferential Efficacy construct ($p = -.198$). There is no correlation between Analytical and Efficacy and Ambition ($p = -.016$) and Need for Sympathy ($p = .018$). There is a significant correlation (at the 0.01 level) level for the constructs, Alienation ($p = -.152$), Working Style ($p = -.169$), Other-Self Divergence ($p = -.233$) and Competence Doubt ($p = -.239$).

The IP significantly impacts the Exploratory Search and Processing Efficacy construct ($p = -.236$). This suggests that the IP affects how individuals engage in creative thinking. There is no correlation between Exploratory Search and Processing Efficacy and the constructs, Need for Sympathy ($p = .010$) and Ambition ($p = .034$). Correlation is significant at the 0.01 level can be seen for the constructs, Alienation ($p = -.175$), Working Style ($p = -.242$), Other-Self Divergence ($p = -.267$) and Competence Doubt ($p = -.296$).

The IP significantly impacts the Exploratory Search and Processing Efficacy construct ($p = -.232$). The IP influences how individuals can persuade and influence others. There is no correlation between Social Influence Efficacy and the constructs Ambition ($p = .035$) and Need for Sympathy ($p = -.046$). Correlation is significant at the 0.01 level for the constructs, Alienation ($p = -.195$), Working Style ($p = -.203$), Other-Self Divergence ($p = -.220$) and Competence Doubt ($p = -.290$).

The IP significantly impacts the Thought and Affected Control construct ($p = -.454$). There is no correlation between Thought and Affected Control: and the construct, Ambition ($p = -.050$). Correlation is significant at the 0.01 level for the following constructs, Need for Sympathy ($p = -.179$), Alienation ($p = -.349$), Other-Self Divergence ($p = -.380$), Working Style ($p = -.398$) and Competence Doubt ($p = -.533$).

The following section presents the relationship between IP and IWB Constructs.

5.6.3 Relationship between IP and IWB Constructs

Table 5.43: Relationship between IP and IWB Constructs

		IWB SCALE	1- EXP OE	2- GEN IG	3- PROM IPR	4- REAL IR	5- SUS IS
Impostor scale		-.139**	-.118**	-.109**	-.083*	-.118**	-.172**
1- CD	Competence Doubt	-.202**	-.181**	-.171**	-.128**	-.171**	-.216**
2- WS	Working Style	-.157**	-.119**	-.085*	-.120**	-.175**	-.198**
3- AL.	Alienation	-.134**	-.109**	-.129**	-.085*	-.095*	-.165**
4- SD	Other-Self Divergence	-.117**	-.113**	-.121**	-.092*	-.086*	-.105**
5- AM	Ambition	.121**	.111**	.102*	.139**	.139**	0,056
6- ND.	Need for Sympathy	-.009	-.009	.031	.013	-.011	-.071

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

** All estimates were statistically significant

Key: OE: OPPORTUNITY EXPLORATION; IG: IDEA GENERATION; IPR: IDEA PROMOTION; IR: IDEA REALISATION; IS: IDEA SUSTAINABILITY

The IP has a significant relationship with IWB ($p = -.139$). There is no correlation between IWB and the Need for Sympathy ($p = -.009$). Correlation is significant at the 0.01 level for the following constructs: Other-Self Divergence ($p = -.117$), Ambition ($p = .121$), Alienation ($p = -.134$), Working Style ($p = -.157$), and Competence Doubt ($p = -.202$).

The IP significantly impacts Opportunity Exploration ($p = -.118$). This phenomenon affects how individuals constantly search for new opportunities or emerging issues in the work setting. There is no correlation between Opportunity Exploration and the Need for Sympathy ($p = -.009$). Correlation is significant at the 0.01 level for the constructs, Alienation ($p = -.109$), Ambition ($p = .111$), Other-Self Divergence ($p = -.113$), Working Style ($p = -.119$) and Competence Doubt ($p = -.181$).

The IP significantly impacts idea generation ($p = -.109$). This phenomenon impacts how individuals take advantage of a chance, create a fresh approach to a persistent or emerging issue, and consider new procedures and processes. There is no correlation between idea generation and the construct Need for Sympathy ($p = .031$). Correlation is significant at the 0.05 level for the following constructs: Working Style ($p = -.085$) and Ambition ($p = .102$). Furthermore, correlation is significant at the 0.01 level for the following constructs: Other-Self Divergence ($p = -.121$), Alienation ($p = -.129$) and Competence Doubt ($p = -.171$).

The IP significantly impacts Idea Promotion ($p = -.083$). This phenomenon impacts how individuals organise or lead a promotional gathering to persuade managers and donors to contribute the funds required to create innovative solutions. There is no correlation between Idea Promotion and the Need for Sympathy ($p = .013$). Correlation is significant at the 0.05 level for Alienation ($p = -.085$) and Other-Self Divergence ($p = -.092$). Correlation is significant at the 0.01 level for the construct's Working Style ($p = -.120$), Competence Doubt ($p = -.128$) and Ambition ($p = .139$).

The IP significantly impacts Idea Realisation ($p = -.118$). This phenomenon impacts how individuals apply the suggested concept or answer to workplace operations. There is no correlation between Idea Realisation and the Need for Sympathy ($p = -.011$). Correlation is significant at the 0.05 level for Other-Self Divergence ($p = -.086$) and Alienation ($p = -.095$). Correlation is significant at the 0.01 level for the following constructs: Ambition ($p = .139$), Competence Doubt ($p = -.171$) and Working Style ($p = -.175$).

The IP significantly impacts Idea Sustainability ($p = -.172$). This phenomenon impacts how individuals evaluate the outcomes of the suggested solutions against the initial set objectives and understand the actions that can be done to ensure that the proposed concept is successfully implemented. There is no correlation between Idea Sustainability and Ambition ($p = 0,056$) and Need for Sympathy ($p = -.071$). Correlation is significant at the 0.01 level for the following

constructs, Other-Self Divergence ($p = -.105$), Alienation ($p = -.165$), Working Style ($p = -.198$) and Competence Doubt ($p = -.216$).

The following section presents the relationship between the IP, self-esteem, decision-making self-efficacy and IWB levels.

5.7 MEDIATOR ROLE OF SELF-ESTEEM IN THE RELATIONSHIP BETWEEN THE IP. DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR.

The first section will present the mediator role of self-esteem in the relationship between the IP and MDMSE Behaviour (Sub-Constructs).

As discussed in section 4.9, Data Analysis, Structural Equation Modelling (SEM), Correlational Coefficients, standardised (regression) coefficients, Squared Multiple Correlations, χ^2 value/degrees of freedom. RMSEA and CFI were used to support the findings for research objective 4: If self-esteem mediates the relationship between the IP, decision-making self-efficacy and IWB.

5.7.1 Mediator Role of Self-esteem in the Relationship between the IP and MDMSE Behaviour (Sub-Constructs)

The standard regression weights of the relationship between the IP and MDMSE are as follows (Table 5.45):

Table 5.44: Standardised Regression Weights: The Mediator Role of Self-Esteem in the Relationship between the IP and MDMSE Behaviour (Sub-Constructs).

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	Competence Doubt	.025	.006	4.021	***
Self-esteem	<---	Ambition	.010	.013	.749	.454
Self-esteem	<---	Working Style	-.001	.002	-.272	.786
Self-esteem	<---	Other-Self Divergence	-.007	.007	-1.094	.274
Self-esteem	<---	Alienation	.006	.006	.972	.331
Self-esteem	<---	Need for Sympathy	-.031	.018	-1.676	.094
MDMSE	<---	Other-Self Divergence	-.128	.134	-.956	.339
MDMSE	<---	Competence Doubt	-.252	.150	-1.677	.094
MDMSE	<---	Need for Sympathy	.593	.409	1.449	.147
MDMSE	<---	Working Style	-.048	.038	-1.245	.213
MDMSE	<---	Ambition	-.230	.266	-.865	.387
MDMSE	<---	Alienation	-.033	.109	-.305	.761
MDMSE	<---	SE	-1.062	2.522	-.421	.674

				ESTIMATE
Self-esteem	<---	Competence Doubt		1.066
Self-esteem	<---	Ambition		.409
Self-esteem	<---	Working Style		-.025
Self-esteem	<---	Other-Self Divergence		-.151
Self-esteem	<---	Alienation		.189
Self-esteem	<---	Need for Sympathy		-1.054
MDMSE	<---	Other-Self Divergence		-.150
MDMSE	<---	Competence Doubt		-.637
MDMSE	<---	Need for Sympathy		1.185
MDMSE	<---	Working Style		-.127
MDMSE	<---	Ambition		-.563
MDMSE	<---	Alienation		-.065
MDMSE	<---	Self-esteem		-.062
Thought and Affected Control	<---	MDMSE		.863
Exploratory Search and Processing Efficacy	<---	MDMSE		.888
Analytical and Inferential Efficacy	<---	MDMSE		.771
Social Influence Efficacy	<---	MDMSE		.763

** All estimates were statistically significant

The SEM is depicted in the Figure 5.5:

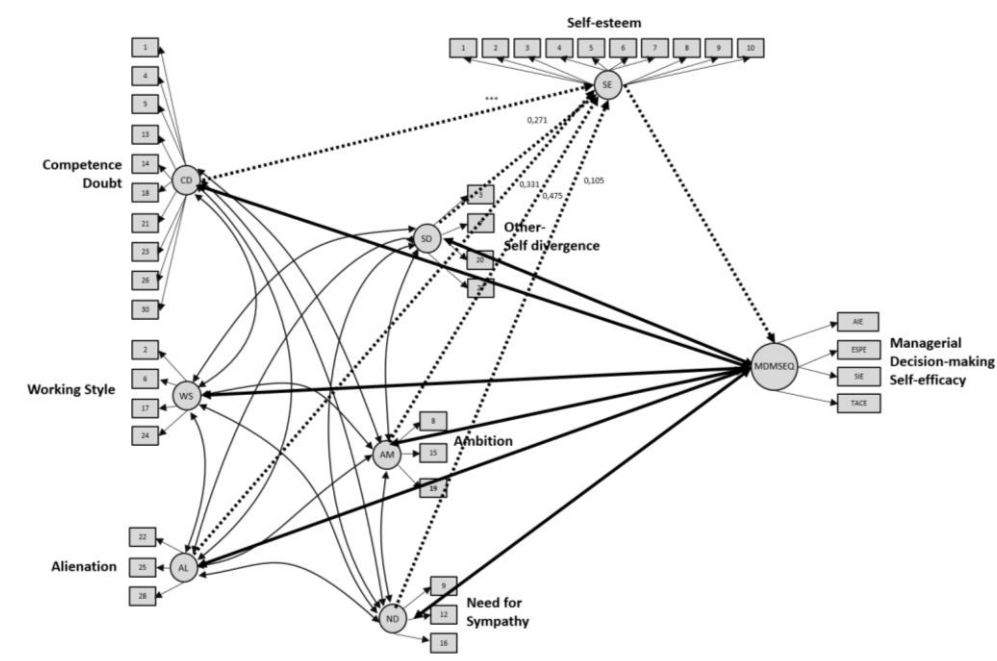


Figure 5.5: Correlations: IP and MDMSE Behaviour (Sub-Constructs)

Source: (Researcher's own)

Based on the above data, self-esteem does not mediate the relationship between the IP and MDMSE Behaviour sub-constructs.

The model fit summary of the instrument for measuring the IP is as follows:

Table 5.45: Chi-Square Value (CMIN) of the IP Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	152	2831.136	750	.000	3.775

** All estimates were statistically significant

The Chi-square value of this model (CMIN =.3775) represents a good model fit.

Table 5.46: Baseline Comparisons of the IP Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.810	.793	.853	.839	.853

** All estimates were statistically significant

The Comparative Fit Index (CFI =.853) is acceptable.

Table 5.47: Root Mean Square Error of Approximation of the IP Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.067	.065	.070	.000

** All estimates were statistically significant

The root mean square error of the estimate of .067 with 90% CI [.065; .070] indicates a good fit.

The valid instrument used to calculate if self-esteem mediates the relationship between the IP and MDMSE Behaviour. Based on the standard regression weights. This section presents correlations of sub-indexes, Chi-square value, CFI and root mean square error (RMSEA).

The following section will present the mediator role of self-esteem in the relationship between the IP and MDMSE Behaviour (Main-Constructs).

5.7.2 Mediator Role of Self-esteem in the Relationship between the IP and MDMSE Behaviour (Main-Constructs)

The standard regression weights of the relationship between the IP and managerial decision-making self-efficacy are as follows (Table 5.49):

Table 5.48: Regression Weights in the Relationship between the IP and MDMSE Behaviour (Main-Constructs)

			ESTIMATE	SE	CR	P
Self-esteem	<---	IP	.014	.001	11,320	***
MDMSE	<---	Self-esteem	-7.080	.898	-7,888	***
MDMSE	<---	IP	-.085	.022	-3,903	***
Need for Sympathy	<---	IP	.707	.035	20.259	***
Ambition	<---	IP	.595	.038	15.593	***
Other-Self Divergence	<---	IP	.753	.031	24.384	***
Alienation	<---	IP	.833	.030	28.033	***
Working Style	<---	IP	.909	.039	23.591	***
Competence Doubt	<---	IP	1.000			
Thought and Affected Control	<---	MDMSE	.993	.045	22.176	***
Exploratory Search and Processing Efficacy	<---	MDMSE	.992	.043	22.819	***
Analytical and Inferential Efficacy	<---	MDMSE	.961	.049	19.617	***
Social Influence Efficacy	<---	MDMSE	1.000			
Self-esteem	<---	Impostor	.513			
MDMSE	<---	Self-esteem	-.415			
MDMSE	<---	IP	-.184			
Need for Sympathy	<---	IP	.677			
Ambition	<---	IP	.564			
Other-Self Divergence	<---	IP	.757			
Alienation	<---	IP	.815			
Working Style	<---	IP	.743			
Competence Doubt	<---	IP	.935			
Thought and Affected Control	<---	MDMSE	.862			
Exploratory Search and Processing Efficacy	<---	MDMSE	.888			
Analytical and Inferential Efficacy	<---	MDMSE	.772			
Social Influence Efficacy	<---	MDMSE	.762			

** All estimates were statistically significant

Table 5.49 shows that the IP and the MDMSE relationship indicates partial mediation.

To calculate the percentage of partial mediation in the relationship between the IP and MDMSE, the following formula is used:

$$\frac{\text{Standardized Total Effects}}{\text{Standardized Indirect Effects}} \times 100 = \%$$

Table 5.49: Standard Regression

	Impostor	SE	MDMSE
Self-esteem	.513	.000	.000
MDMSE	-.397**	.415	.000
Social Influence Efficacy	-.303	-.317	.762
Analytical and Inferential Efficacy	-.306	-.321	.772
Exploratory Search and Processing Efficacy	-.353	-.369	.888
Thought and Affected Control	-.342	-.358	.862
Competence Doubt	.935	.000	.000
Working Style	.743	.000	.000
Alienation	.815	.000	.000
Other-Self Divergence	.757	.000	.000
Ambition	.564	.000	.000
Need for Sympathy	.677	.000	.000

** Standardised Total Effect value for this mediation.

** All estimates were statistically significant

Table 5.50: Standardised Indirect Effects

	IP	SELF-ESTEEM	MDMSE
Self-esteem	.000	.000	.000
Managerial Decision-Making Self-Efficacy	-.213**	.000	.000
Social Influence Efficacy	-.303	-.317	.000
Analytical and Inferential Efficacy	-.306	-.321	.000
Exploratory Search and Processing Efficacy	-.353	-.369	.000
Thought and Affected Control	-.342	-.358	.000
Competence Doubt	.000	.000	.000
Working Style	.000	.000	.000
Alienation	.000	.000	.000
Other-Self Divergence	.000	.000	.000
Ambition	.000	.000	.000
Need for Sympathy	.000	.000	.000

** Standardised Indirect Effect value for this mediation. ** All estimates were statistically significant

The calculation is, therefore, as follows:

$$\frac{\text{Standardized Total Effects}}{\text{Standardized Indirect Effects}} \times 100 = \%$$

$$\frac{-.213}{-.397} \times 100 = 53.67\%$$

Based on the data presented above, there is a partial mediation of 53.67% by self-esteem in the relationship between the IP and MDMSE Behaviour main constructs. The correlations of these sub-areas are depicted in the illustration, Figure 5.6 below:

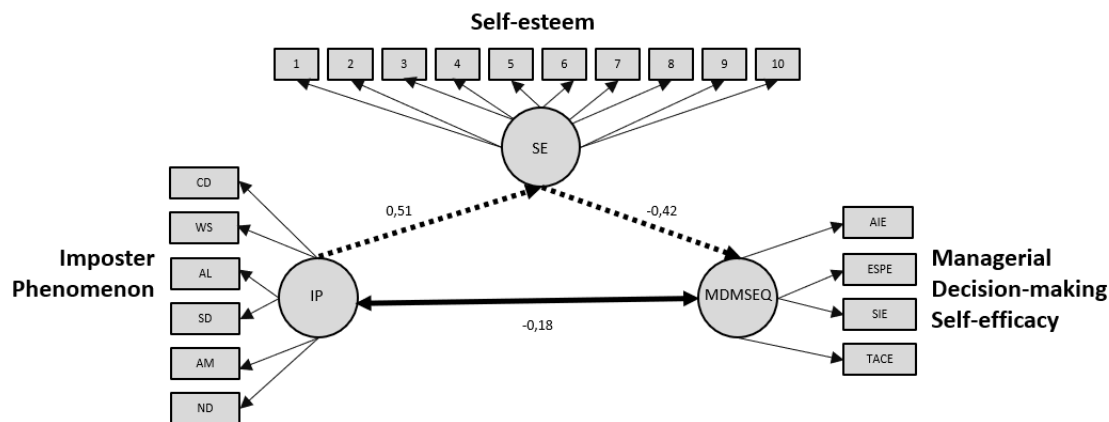


Figure 5.6: Correlations: IP and MDMSE Behaviour (Main-Constructs)

Source: (Researcher's own)

Table 5.51: Correlational Values: IP and MDMSE Behaviour (Main-Constructs)

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	IP	.014	.001	11.320	***
Managerial Decision-Making Self-Efficacy	<---	Self-esteem	-7.080	.898	-7.888	***
Managerial Decision-Making Self-Efficacy	<---	IP	-.085	.022	-3.903	***

			ESTIMATE
Self-esteem	<---	IP	.513
Managerial Decision-Making Self-Efficacy	<---	Self-esteem	-.415
Managerial Decision-Making Self-Efficacy	<---	IP	-.184

** All estimates were statistically significant

The model fit summary of the instrument for measuring the relationship between the IP and the MDMSE (main constructs) is as follows:

Table 5.52: Chi-Square Value (CMIN) of the IP Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	63	1346.138	167	.000	8.061

** All estimates were statistically significant

The Chi-square value of this model (CMIN = 8.061) represents a good model fit.

Table 5.53: Baseline Comparisons of the IP Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.806	.779	.826	.801	.825

** All estimates were statistically significant

The Comparative Fit Index (CFI =.825) is acceptable.

Table 5.54: Root Mean Square Error of Approximation of the IP Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.107	.102	.112	.000

** All estimates were statistically significant

The RMSEA of .107, with 90% CI [.102;.112], indicates a good fit.

The instrument for measuring the relationship between the IP and MDMSE(main constructs) is valid. Based on the standard regression weights, correlations of sub-indexes and Chi-square value. Comparative fit index and root mean square error are presented in this section. The following section will present the mediator role of self-esteem in the relationship between the IP and IWB (Sub-Constructs).

5.7.3 Mediator Role of Self-esteem in the Relationship Between the IP and IWB (Sub-Constructs)

The standard regression weights of the relationship between the IP and IWB (Sub-Constructs) are as follows (Table 5.56):

Table 5.55: Correlational Values: IP and IWB

		ESTIMATE	SE	CR	P
Self-esteem	<--- Competence Doubt	.025	.006	3.940	***
Self-esteem	<--- Ambition	.010	.013	.714	.475
Self-esteem	<--- Working Style	-.001	.002	-.277	.782
Self-esteem	<--- Other-Self Divergence	-.008	.007	-1.100	.271
Self-esteem	<--- Alienation	.006	.006	.972	.331
Self-esteem	<--- Need for Sympathy	-.030	.019	-1.622	.105
IWB	<--- Other-Self Divergence	-.008	.009	-.902	.367
IWB	<--- Competence Doubt	.010	.009	1.115	.265
IWB	<--- Need for Sympathy	-.013	.022	-.587	.557
IWB	<--- Working Style	-.001	.003	-.536	.592
IWB	<--- Ambition	.013	.015	.875	.381
IWB	<--- Alienation	-.005	.008	-.707	.480
IWB	<--- Self-esteem	-.449	.149	-3.019	.003
Opportunity Exploration	<--- IWB	.987	.032	30.547	***

			ESTIMATE	SE	CR	P
Idea Generation	<---	IWB	.965	.030	32.492	***
Idea Promotion	<---	IWB	.998	.027	37.124	***
Idea Realisation	<---	IWB	.928	.026	36.371	***
Idea Sustainability	<---	IWB	1.000			

** All estimates were statistically significant

Based on the values presented in Table 5.56 above, Self-esteem mediates Competence Doubt through Self-esteem to IWB completely. There is no mediation with Self-esteem for any of the other IP sub-constructs.

Table 5.56: Standardised Regression Weights

			ESTIMATE
Self-esteem	<---	Competence Doubt	1.068
Self-esteem	<---	Ambition	.399
Self-esteem	<---	Working Style	-.026
Self-esteem	<---	Other-Self Divergence	-.155
Self-esteem	<---	Alienation	.191
Self-esteem	<---	Need for Sympathy	-1.044
IWB	<---	Other-Self Divergence	-.124
IWB	<---	Competence Doubt	.348
IWB	<---	Need for Sympathy	-.349
IWB	<---	Working Style	-.047
IWB	<---	Ambition	.423
IWB	<---	Alienation	-.136
IWB	<---	Self-esteem	-.344
Opportunity Exploration	<---	IWB	.844
Idea Generation	<---	IWB	.867
Idea Promotion	<---	IWB	.914
Idea Realisation	<---	IWB	.907
Idea Sustainability	<---	IWB	.909

** All estimates were statistically significant

The correlations of these sub-areas are depicted in the illustration, Figure 5.7.

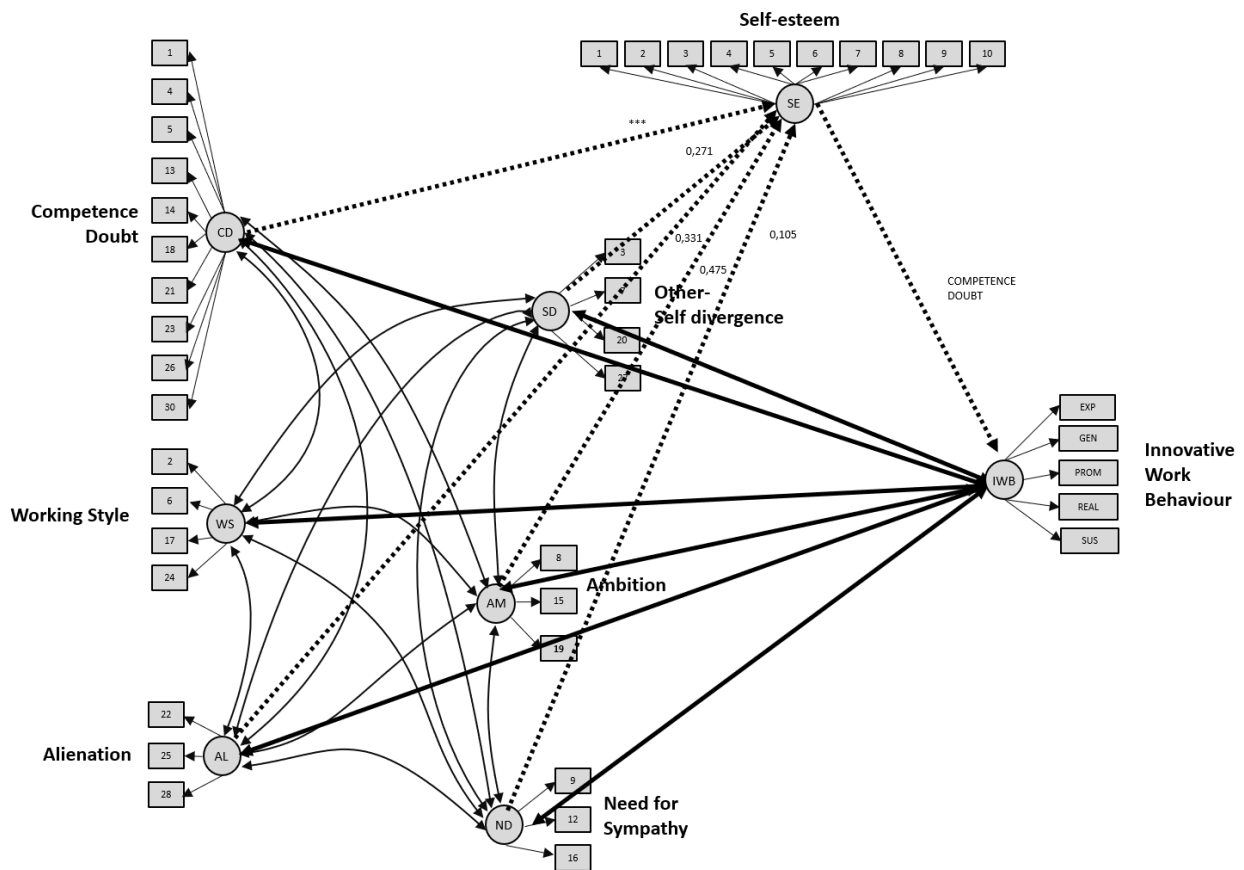


Figure 5.7: Correlations: IP and Innovative Work Behaviour (Sub-Constructs)

Source: (Researcher's own)

The model fit summary of the instrument measuring self-esteem as the mediator in the relationship between the IP and IWB is as follows:

Table 5.57: Chi-Square Value (CMIN) of the IP Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	155	2724.684	790	.000	3.449

** All estimates were statistically significant

The Chi-square value of this model (CMIN = 3.449) represents a good model fit.

Table 5.58: Baseline Comparisons of the IP Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.832	.817	.875	.863	.874

** All estimates were statistically significant

The Comparative Fit Index (CFI =.874) is acceptable.

Table 5.59: Root Mean Square Error of Approximation of the IP Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.063	.061	.066	.000

** All estimates were statistically significant

The root mean square error of estimate of .063, with 90% CI [.061; .066], indicates a good fit.

This section presents the correlations of sub-indexes χ^2 value, CFI and RMSEA based on the standard regression weights; the instrument measuring self-esteem as the mediator in the relationship between the IP and IWB is valid.

The following section presents the mediator role of self-esteem in the relationship between the IP and IWB (Main-Constructs).

5.7.4 Mediator Role of Self-esteem in the Relationship Between the IP and Innovative Work Behaviour (Main-Constructs)

The standard regression weights of the relationship between the IP and Self-esteem are as follows:

Table 5.60: Standardised Regression Weights

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	IP	.014	.001	11.238	***
Innovative Work Behaviour	<---	Self-esteem	-.446	.069	-6.459	***
Innovative Work Behaviour	<---	IP	.003	.002	1.764	.078

** All estimates were statistically significant

Table 5.61 above shows complete mediation by Self-esteem between the IP and IWB constructs. The correlations of these sub-areas are depicted in Figure 5.8.

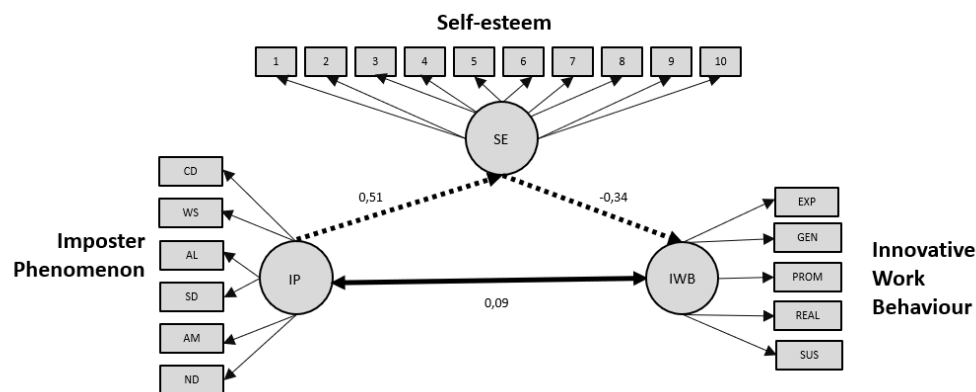


Figure 5.8: Correlations: IP and Innovative Work Behaviour (Main-Constructs)

Source: (Researcher's own)

Table 5.61: Correlational Values: IP and Innovative Work Behaviour (Main-Constructs)

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	IP	.014	.001	11.238	***
IWB	<---	Self-esteem	-.446	.069	-6.459	***
IWB	<---	IP	.003	.002	1.764	.078

			ESTIMATE
Self-esteem	<---	IP	.510
IWB	<---	Self-esteem	-.344
IWB	<---	IP	.088
Need for Sympathy	<---	IP	.683
Ambition	<---	IP	.570
Other-Self Divergence	<---	IP	.757
Alienation	<---	IP	.818
Working Style	<---	IP	.742
Competence Doubt	<---	IP	.931
Opportunity Exploration	<---	IWB	.844
Idea Generation	<---	IWB	.867
Idea Promotion	<---	IWB	.914
Idea Realisation	<---	IWB	.907
Idea Sustainability	<---	IWB	.909

** All estimates were statistically significant

Based on the above data, self-esteem completely mediates the relationship between the IP and IWB. The model fit summary of the instrument for measuring the IP is as follows:

Table 5.62: Chi-Square Value (CMIN) of the IP and Innovative Work Behaviour (Main-Constructs)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	66	1249.598	186	.000	6.718

** All estimates were statistically significant

The χ^2 value of this model (CMIN = 6.718) represents a good model fit.

Table 5.63: Baseline Comparisons of the IP and Innovative Work Behaviour (Main-Constructs)

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.849	.830	.869	.851	.868

** All estimates were statistically significant

The Comparative Fit Index (CFI = .868) is acceptable.

Table 5.64: Root Mean Square Error of Approximation of the IP and Innovative Work Behaviour (Main-Constructs)

Model	Root Mean Square Error of Approximation	LO 90	HI 90	PCLOSE
Default model	.096	.091	.102	.000

** All estimates were statistically significant

The root mean square error of estimate of .096, with 90% CI [.091;.102], indicates a good fit.

Based on the standard regression weights. This section presents correlations of sub-indexes, χ^2 value, CFI and RMSEA, the instrument used to determine the mediation by self-esteem in the relationship between the IP and IWB.

5.8 RELATIONSHIP BETWEEN THE IP, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR LEVELS.

As discussed in Section 4.9, RMSEA and CFI were used to support the findings for research objective 5: If there is a relationship between the IP, MDMSE and IWB of managers in South Africa.

The first section discusses the relationship between the IP and self-esteem.

5.8.1 Relationship: IP and Self-esteem

The standard regression weights of the relationship between the IP and self-esteem are as follows:

Table 5.65: Standardised Regression Weights: IP and Self-esteem

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	Other-Self divergences	-.007	.006	-1.105	.269
Self-esteem	<---	Competence Doubt	.021	.005	3.890	***
Self-esteem	<---	Need for Sympathy	-.025	.016	-1.622	.105
Self-esteem	<---	Working Style	.000	.002	-.277	.782

			ESTIMATE	S.E.	C.R.	P
Self-esteem	<---	Ambition	.008	.011	.714	.475
Self-esteem	<---	Alienation	.005	.005	.971	.332

			ESTIMATE
Self-esteem	<---	Other-Self divergence	-.155
Self-esteem	<---	Competence Doubt	1.067
Self-esteem	<---	Need for Sympathy	-1.042
Self-esteem	<---	Working Style	-.026
Self-esteem	<---	Ambition	.397
Self-esteem	<---	Alienation	.193

According to Table 5.66, the following items indicate the most vital relationship: Competence Doubt ($\beta = 1.067$), Need for Sympathy ($\beta = -1.042$) and Ambition ($\beta = .397$). The items with a lower indication of relationship are Working Style ($\beta = -.026$), Other-Self divergence ($\beta = -.155$) and Alienation ($\beta = .193$). The correlations of these sub-areas are depicted in Figure 5.9.

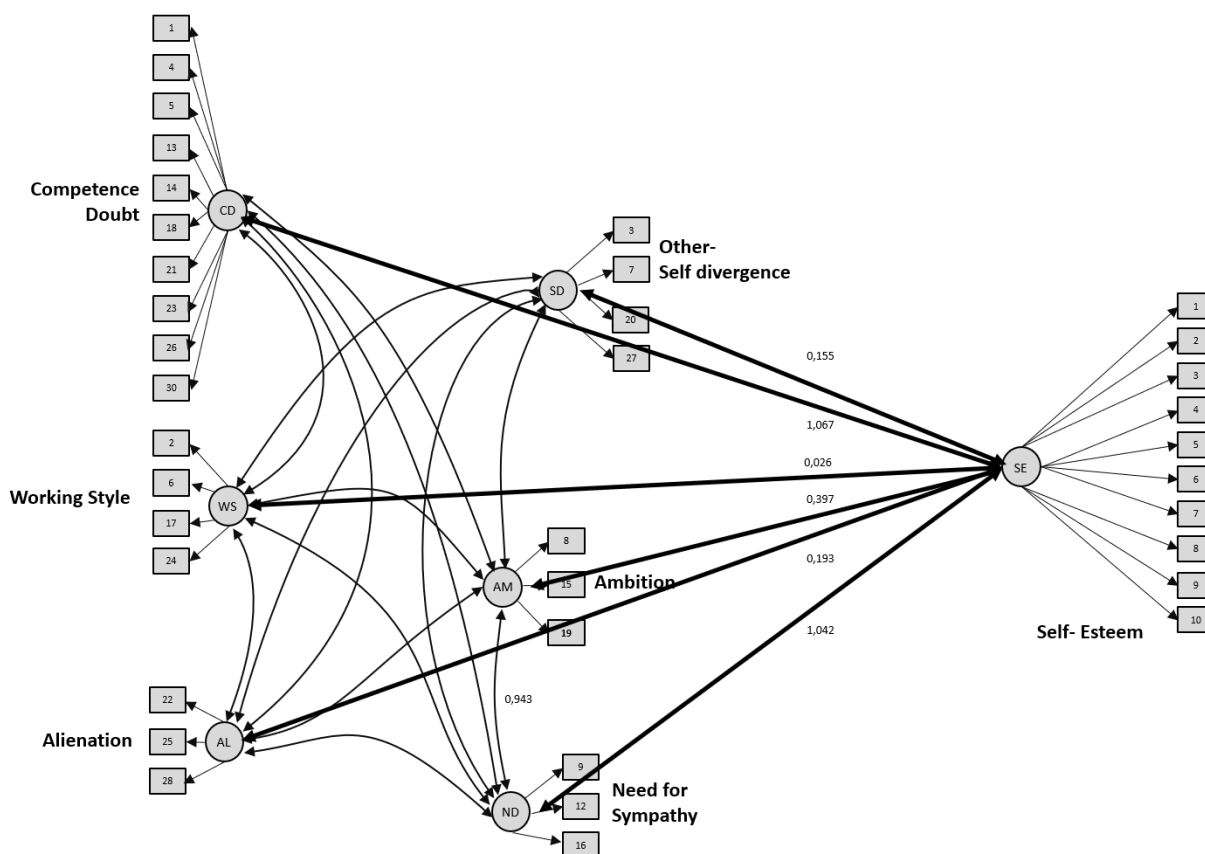


Figure 5.9: Correlations: IP and Self-esteem

Source: (Researcher's own)

Table 5.66: Squared Multiple Correlations: IP and Self-esteem

	Estimate
Self-esteem	.598

** All estimates were statistically significant

The squared multiple correlations of this model are .598, which indicates that almost 60% of self-esteem total variance is explained by the IP. The model fit summary of the relationship between the IP and self-esteem is as follows:

Table 5.67: Chi-Square Value (CMIN) of the IP and Self-Esteem

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	133	2319.121	607	.000	3.821

** All estimates were statistically significant

The χ^2 value of this model (CMIN = 3.821) represents a good model fit.

Table 5.68: Baseline Comparisons of the IP and Self-esteem Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.818	.801	.859	.845	.859

** All estimates were statistically significant

The Comparative Fit Index (CFI = .859) is acceptable.

Table 5.69: Root Mean Square Error of Approximation of the IP and Self-esteem Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.068	.065	.071	.000

** All estimates were statistically significant

The root mean square error of estimate of .068, with 90% CI [.065;.071], indicates a good fit.

This section presents sub-indexes, χ^2 value, CFI and RMSEA correlations based on the standard regression weights. The relationship between the IP and MDMSE will be discussed in the next section.

5.8.2 Relationship: IP and Managerial Decision-Making Self-Efficacy

The standard regression weights of the relationship between the IP and MDMSE are as follows:

Table 5.70: Root Mean Square Error of Approximation of the Impostor Phenomenon and Self-esteem Model

			ESTIMATE	S.E.	C.R.	P
MSDM	<---	Other-Self Divergence	-.121	.132	-.917	.359
MSDM	<---	Competence Doubt	-.281	.120	-2.339	.019
MSDM	<---	Need for Sympathy	.616	.364	1.693	.090
MSDM	<---	Working Style	-.047	.040	-1.185	.236
MSDM	<---	Ambition	-.237	.260	-.911	.363
MSDM	<---	Alienation	-.039	.117	-.332	.740

			ESTIMATES
MSDM	<---	Alienation	-.074
MSDM	<---	Working Style	-.125
MSDM	<---	Other-Self Divergence	-.142
MSDM	<---	Ambition	-.578
MSDM	<---	Competence Doubt	-.709
MSDM	<---	Need for Sympathy	1.249

** All estimates were statistically significant

According to Table 5.71 above, the following items indicated the most vital relationship: Need for Sympathy ($p = 1.249$), *Competence Doubt* ($p = -.709$) and *Ambition* ($p = -.578$). The items with a lower indication of relationship are *Alienation* ($p = -.074$), *Working Style* ($p = -.125$) and *Other-Self Divergence* ($p = -.142$). The correlations of these sub-areas are depicted in the illustration, Figure 5.10 below:

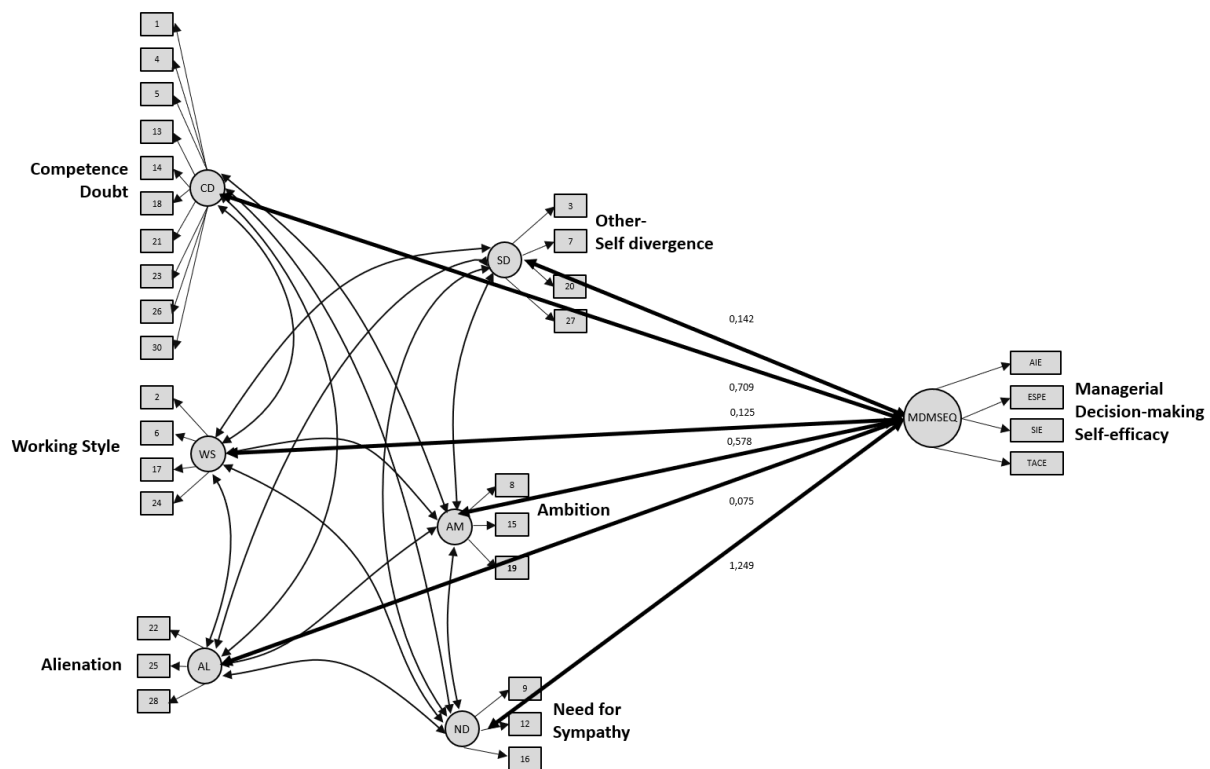


Figure 5.10: Correlations: Impostor Phenomenon and Managerial Decision-Making Self-Efficacy

Source: (Researcher's own)

The correlations of the model above range from -.142 to -.74, which indicates the validity of this model.

Table 5.71: Impostor Phenomenon and Managerial Decision-Making Self-Efficacy

	ESTIMATE
MDMSE	.422

** All estimates were statistically significant

The squared multiple correlations of this model are .422, which is considered moderately correlated. The model fit summary of the instrument for measuring the relationship between the IP and the MDMSE is as follows:

Table 5.72: Chi-Square Value (CMIN) of the Impostor Phenomenon and Managerial Decision-Making Self-Efficacy model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	115	1801.077	412	.000	4.372

** All estimates were statistically significant

The χ^2 value of this model (CMIN = 4,372) represents a good model fit.

Table 5.73: Baseline Comparisons of the Impostor Phenomenon and Managerial Decision-Making Self-Efficacy

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.846	.826	.877	.860	.876

** All estimates were statistically significant

The Comparative Fit Index (CFI =.876) is acceptable.

Table 5.74: Root Mean Square Error of Approximation of the Impostor Phenomenon and Managerial Decision-Making Self-Efficacy Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.074	.071	.078	.000

** All estimates were statistically significant

The root mean square error of estimate of .074, with 90% CI [.071;.078], indicates a good fit.

Based on the standard regression weights, correlations of sub-indexes, χ^2 value, CFI and RMSEA presented in this section, The instrument for measuring the relationship between IP and MDMSE used in this study is valid.

The relationship between the IP and IWB is discussed in the next section.

5.8.3 Relationship: Impostor Phenomenon and IWB

The standard regression weights of the relationship between the IP and IWB are as follows:

Table 5.75: Standard Regression Weights of the Relationship between the Impostor Phenomenon and Innovative Work Behaviour

			ESTIMATE	S.E.	C.R.	P
IWB	<---	Other-Self Divergence	-.005	.008	-.590	.555
IWB	<---	Competence Doubt	.000	.007	-.001	.999

			ESTIMATE	S.E.	C.R.	P
IWB	<---	Need for Sympathy	-.001	.018	-.075	.940
IWB	<---	Working Style	-.001	.002	-.392	.695
IWB	<---	Ambition	.010	.013	.770	.441
IWB	<---	Alienation	-.008	.008	-1.061	.289

ESTIMATES					
IWB	<---	Competence Doubt			.000
IWB	<---	Working Style			-.034
IWB	<---	Need for Sympathy			-.036
IWB	<---	Other-Self Divergence			-.076
IWB	<---	Alienation			-.211
IWB	<---	Ambition			.325

** All estimates were statistically significant

According to Table 5.76 above, the following items indicated the most vital relationship: Ambition ($p = .325$), Alienation ($p = -2.11$) and Other-Self Divergence ($p = .076$). The items with a lower indication of relationship are Competence Doubt ($p = .000$), Working Style ($p = -.034$) and Need for Sympathy ($p = .036$). The correlations of these sub-areas are depicted in Figure 5.11.

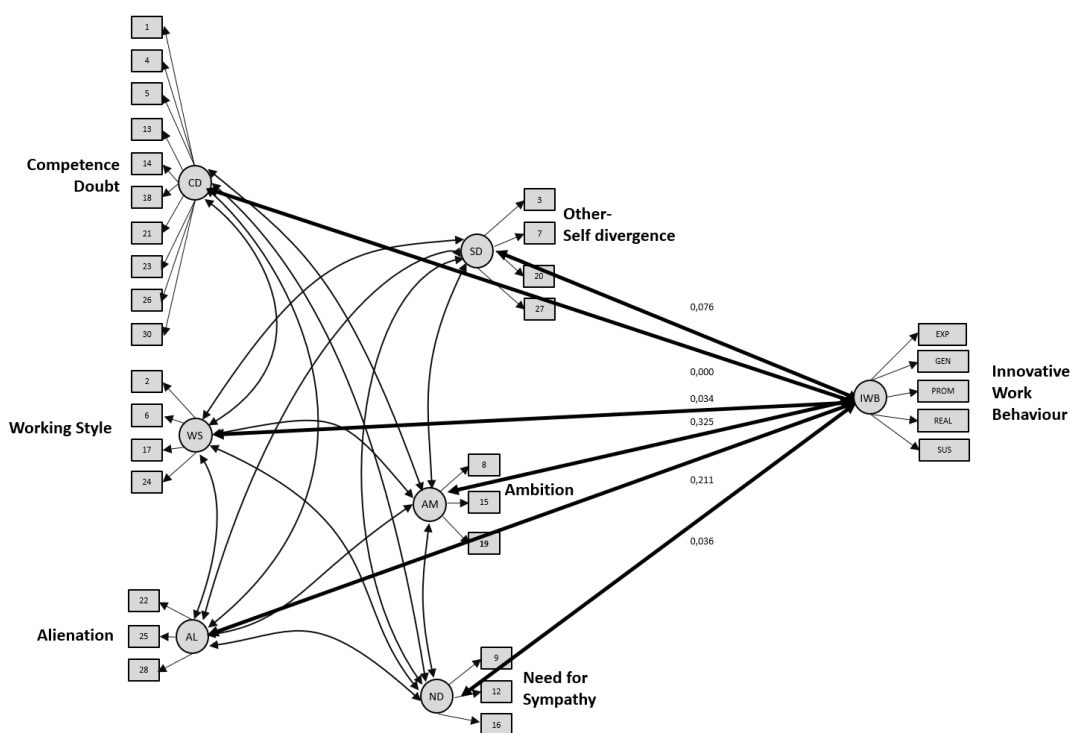


Figure 5.11: Correlations: Impostor Phenomenon and Innovative Work Behaviour Model

Source: (Researcher's own)

The correlations of the model above range from -.075 and -2.11, indicating this model's validity.

Table 5.76: Impostor Phenomenon and Innovative Work Behaviour Model

	ESTIMATE
IWB	.071

** All estimates were statistically significant

The squared multiple correlations of this model are .071, which is considered a low correlation. The model fit summary of the instrument for measuring the relationship between the Impostor Phenomenon and innovative work behaviour is as follows:

Table 5.77: Chi-Square Value (CMIN) of Impostor phenomenon and Innovative Work Behaviour model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	118	1757.466	442	.000	3.976

** All estimates were statistically significant

The χ^2 value of this model (CMIN = 3.976) represents a good model fit.

Table 5.79: Baseline Comparison of the Impostor Phenomenon and Innovative Work Behaviour model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.865	.849	.896	.882	.895

** All estimates were statistically significant

The Comparative Fit Index (CFI =.895) is acceptable.

Table 5.78: Root Mean Square Error of Approximation of the Impostor Phenomenon and Innovative Work Behaviour Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.070	.066	.073	.000

** All estimates were statistically significant

The root mean square error of estimate of .070, with 90% CI [.066;.073 indicates a good fit.

Based on the standard regression weights. This section presents correlations of sub-indexes, χ^2 value, CFI and RMSEA. The instrument for measuring the relationship between the IP and IWB used in this study is valid.

5.9 SUMMARY

The quantitative findings of the cross-sectional survey were examined in this chapter – the IP, IWB and MDMSE are all topics covered in this analysis. The demographics and sample size of the data were included in this chapter. Issues relating to the research design and the data were examined. The process of data analysis and interpretation was covered. Additionally, this chapter developed links between the critical components of the research. It assessed whether self-esteem had a mediating function in this study.

This study sought to understand the relationship between the IP and the research components. It evaluated how this phenomenon affected IWB and MDMSE. The findings are presented in the next and final chapter of this study.

The findings illustrate that the connection between the research constructs and the mediating function of self-esteem is established. The findings illustrate the IP's influence on IWB and MDMSE and show the possible impact of IP on these areas if it is not addressed effectively. The study's concluding chapter presents a summary of the results together with the answers to the research questions. This chapter also includes recommendations for further research, explanations for these topics and their significance for current practice.

CHAPTER 6

DISCUSSION AND CONCLUSION

“One of the ways to get out of a tight box
is to invent a way out.”
– Jeff Bezos –

6.1 INTRODUCTION

This study aimed to develop a framework for assessing the influence of the Impostor Phenomenon on critical leadership competencies and to establish if self-esteem acts as a mediator. The influence of the IP on leadership competencies, such as IWB and MDMSE, needs to be determined for leaders to identify, understand, manage and control the impact of this phenomenon. The study is significant because no research has investigated the relationship between the IP and these leadership skills in South Africa. This study was conducted within the quantitative paradigm using a cross-sectional correlational survey design to attain the research objectives, provide answers to the questions and test the hypotheses. The population is comprised of managers from South Africa. Convenience sampling was used to obtain a representative sample.

This study combines theory and practice. The practical value of this research benefits any leader. Managers must determine how the IP affects leadership competencies, such as IWB and MDMSE, and manage and control its impact. The findings of this study will assist leaders in gaining a deeper understanding of its impact on their leadership, decision-making and risk-taking abilities, all of which influence their overall leadership abilities.

This study represents a harmonious fusion of theoretical constructs and real-world applications. Its pragmatic implications hold substantial advantages for leaders across diverse contexts. In particular, the research examines the practical implications of the Imposter Phenomenon, offering pertinent insights for leaders of varying backgrounds. By investigating its effects on critical leadership competencies such as Innovative Work Behaviour and Managerial Decision-Making Self-Efficacy, this study acknowledges the pressing need for managers to not only comprehend but also effectively manage and mitigate the impact of the Imposter Phenomenon within their leadership paradigms.

The outcomes of this study are poised to furnish leaders with invaluable tools for introspection and growth. By delving into the intricate ways, the Imposter Phenomenon intertwines with

leadership, decision-making processes, and risk-taking propensity, leaders can cultivate a more profound awareness of its intricate dynamics. These insights, in turn, promise to bolster leaders' overall capacities by enabling them to navigate the challenges posed by the Imposter Phenomenon with enhanced efficacy. Thus, the study's findings possess the potential to fortify leaders' abilities, fostering more resilient decision-making, propelling innovation, and ultimately augmenting their holistic leadership acumen.

In the next section, the research objectives of this study are addressed by relating the findings to the research questions. The objectives of the study were as follows:

- To investigate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour levels of managers.
- To evaluate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour measuring instruments' validity and reliability in the South African context.
- To determine the differences in the mean scores of the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.
- To determine whether self-esteem mediates the relationship between the impostor phenomenon, decision-making self-efficacy and innovative work behaviour.
- To determine if there is a relationship between the impostor phenomenon, self-decision-making efficacy and innovative work behaviour of managers in South Africa.

As concluded in the previous chapter, the numerical data was assessed using the statistical program SPSS v 28. The results were summarised using descriptive statistics, including averages and variability measures. Reviews and evaluations of the data relating to the primary research constructs, namely the IP, self-esteem, MDMSE and IWB, were conducted. These evaluations allowed the understanding of the connections between the IP (independent variable), self-esteem (mediating variable), as well as MDMSE, and IWB (dependent variables). The following sections will outline the findings of this analysis and a discussion to respond to the study's objectives.

6.2 IMPOSTOR PHENOMENON, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR LEVELS OF MANAGERS/LEADERS

The first objective was to establish managers' IP, self-esteem, MDMSE and IWB levels. The data findings are presented in the next section, describing each construct. Extracts from the literature are used to support these findings. The first section discusses the levels of the IP of leaders/managers. The descriptive statistics of the IP indicated that respondents had moderate impostor tendencies on all the sub-scales. This indicates that respondents had moderate levels of reasonable doubt in their abilities; a tendency towards perfectionism and overworking; moderate levels of feeling disconnected from their true selves; moderate needs for external validation; and some feelings of being disconnected from others.

- As discussed in Section 4.9 and Section 5.3, descriptive statistics were used to support the findings for Research Objective 1: To investigate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour levels of managers.

6.2.1 Impostor phenomenon levels of managers/leaders

The findings indicated that the IP scores range from a minimum of 0 to a maximum of 100. On the IP scale, participants reported a mean score of 34.08 (SD = 22.57) on the Competence Doubt sub-scale, indicating some reasonable doubt in their abilities. On the Working Style sub-scale, participants reported a mean score of 33.63 (SD = 25.79), indicating a tendency towards perfectionism and overworking. On the Other-Self-Divergence sub-scale, participants reported a mean score of 32.07 (SD = 20.97), indicating moderate levels of feeling disconnected from their true selves. On the Ambition sub-scale, participants reported a mean score of 51.31 (SD = 22.25), indicating moderate levels of determination. Participants reported a mean score of 49.39 (SD = 22.03) on the Need for Sympathy sub-scale, indicating a moderate need for external validation. Finally, on the Alienation sub-scale, participants reported a mean score of 37.54 (SD = 21.56), indicating moderate feeling disconnected from others.

Participants reported a mean score of 34.08 (SD = 22.57) on the Competence Doubt sub-scale. This score indicates a slight tendency of reasonable doubt; respondents believe they are unlikely influenced by self-doubt, dread of failure and unhealthy perfectionism. The minority of the respondents in this study have low impostor tendencies; therefore, they will be unlikely to show high levels of these characteristics, which are commonly associated with the IP. The following studies support these findings. The IP causes psychological worry, increased self-monitoring,

self-doubt and recurrent feelings of failure. The self-doubt created by impostor feelings leads individuals to overproduce to demonstrate their potential (Lane, 2015). Research indicated that the IP is prevalent among high-achieving individuals, particularly in professional settings (Clance & Imes, 1978). The literature indicated that impostors often experience a constant fear of being exposed to fraud, leading to feelings of self-doubt (Chrisman *et al.*, 1995). Research by Clance and Imes (1978) found that individuals with IP experience self-doubt and have difficulty internalising their successes; these individuals often attribute their achievements to external factors, such as luck or the help of others than their abilities.

A desire for self-preservation and self-development drives the actions of impostors. To validate their delusions of intellectual prowess boost their self-esteem, and suppress their self-doubt, impostors seek to attain high levels of personal success (Langford & Clance, 1993). They rely on strict work procedures to prevent making mistakes. When faced with a complex situation, they often tend to self-limit and avoid situations that could result in negative comments regarding their competence (Dudău, 2014; Ross & Krukowski, 2003). When impostors succeed, their sense of competence temporarily increases; when they fail, they give tactical explanations, indicating that both their abilities and sense of self-efficacy influence their impostor feelings (Want & Kleitman, 2006).

Regarding the Working Style sub-scale, participants reported a mean score of 33.63 (SD = 25.79). This score indicates a slight tendency towards perfectionism and overworking: respondents believe they are unlikely to manifest pro- and pre-crastination tendencies. The minority of the respondents in this study have low impostor tendencies; therefore, they will unlikely show high levels of these characteristics, which are commonly associated with the IP.

As seen in literature, according to Clance and Imes (1978), the impostor loop begins when an individual suffering from the IP is confronted with an achievement-related goal, such as a work or school assignment. Anxiety, self-doubt, and concern emerge instantly following such an assignment. The loop allows for two possible responses to these emotions: over-preparation and procrastination (Clance & Imes, 1978).

Impostors may either engage in procrastination behaviours, which is the tendency to delay or postpone tasks, often due to a fear of failure or feelings of inadequacy (Ferrari & Thompson, 2006; Ferrari *et al.*, 1995), or pre-crastination behaviours, which is the tendency to complete tasks quickly and excessively, particularly when they felt pressured to prove their competence. Procrastination allows individuals to avoid potential failure and criticism, while pre-crastination

allows them to prove their competence quickly before any doubts arise. These tendencies may serve as a way for individuals to cope with their self-doubt and fear of failure (Rosenbaum *et al.*, 2014). It is consistent with the notion that impostors delay their duties out of dread of criticism because they fear appearing incompetent (Clance & Imes, 1978; Lyons & Rice, 2014). Research further indicates that individuals with higher levels of self-esteem are less likely to procrastinate (Klassen *et al.*, 2008). Therefore, it is evident that a direct correlation exists between procrastinators' low self-esteem and IP tendencies.

On the Other-Self-Divergence sub-scale, participants reported a mean score of 32.07 (SD = 20.97). This score indicates moderate self-divergence: respondents believed they are unlikely to view situational standards as too demanding. Individuals with impostor tendencies often perceive situational standards as too high and may feel overwhelmed by the expectations placed upon them. The minority of the respondents in this study had low impostor tendencies; therefore, they were unlikely to report high levels of viewing situational standards as too demanding. Individuals who experience the IP often struggle with setting realistic goals and may perceive situational standards as too demanding. These individuals may experience a sense of failure when they cannot meet these standards, leading to feelings of inadequacy and self-doubt. Research by Cokley *et al.* (2013) found that impostors often feel that they must meet the expectations of others, leading to a constant fear of failure. Individuals might view situational standards as unattainable and engage in self-sabotaging behaviours. Professional and demanding settings often provoke impostor tendencies (Parkman, 2016). Environments with ambiguous performance standards, varying levels of support and intense competition may inadvertently foster impostor traits such as self-doubt and fraudulence, which leads to disconnectedness (Seritan & Mehta, 2016). Individuals who are more conscientious, success-oriented and perfectionistic in their goals and those who work in highly competitive and demanding professions are more likely to be influenced by this phenomenon. Impostors may view situational standards as too demanding due to their beliefs and thought patterns. The IP, feelings of self-doubt, fear of failure, and the belief that one's successes result from luck or other external factors rather than one's abilities can overwhelm individuals. Therefore, situational demands may lead to impostors questioning their ability to meet them. (Clance & Imes, 1978).

Research has shown that individuals who experience the IP may be prone to perfectionism and set unrealistically high standards for themselves (Cokley *et al.*, 2013). This may lead to anxiety and stress when faced with situational demands that they perceive as exceeding their abilities. Additionally, individuals with the IP may be hesitant to seek help or support, believing that doing so would expose their supposed inadequacies and confirm their fears of being a fraud.

Furthermore, individuals who suffer from IP underestimate their abilities and overestimate the abilities of others (Chrisman *et al.*, 1995). This may contribute to their perception of situational demands as too high, as they may believe that others are better equipped to meet these demands.

On the Ambition sub-scale, participants reported a mean score of 51.31 (SD = 22.25). This score indicates moderate levels of determination: respondents have a neutral view of the drive to accomplish something remarkable. While some research suggests that ambition may influence impostor tendencies, the results are mixed and may depend on the specific context and individuals being examined. The literature review has shown that individuals who experience the IP often set high goals for themselves and excessively strive to prove their competence. These individuals may experience anxiety and self-doubt even after success. Research by Langford and Clance (1993) found that individuals with IP may use their achievements to alleviate self-doubt and validate their self-worth. These individuals may be motivated to prove to themselves and others that they are competent, despite their internal doubts and fears. Often, the emotions of impostors are heightened; as a result, they become workaholics, resulting in exhaustion and increased fatigue (Cowman & Ferrari, 2002). Rarely do impostors attempt to lower their expectations to assuage this stress (Leary *et al.*, 2000).

Individuals with impostor tendencies frequently overestimate the abilities of others, leading them to become preoccupied with their effort, ambition and perfection. Because of the lofty success standards, they set for themselves, goals eventually become unattainable. Frequently, failure and anxiety result from this self-imposed requirement (Clance & Imes, 1978). Furthermore, research by Cokley *et al.* (2013) found that individuals with IP may use their achievements to validate their self-concept and cope with their negative feelings; they may be driven to accomplish remarkable things to compensate for inadequacy.

Participants reported a mean score of 49.39 (SD = 22.03) on the Need for Sympathy sub-scale. This score indicates a moderate need for external validation: respondents have a neutral view of how cooperative and conflict-averse they are. The minority of the respondents in this study have low impostor tendencies; therefore, they will present fluctuating levels of being cooperative and conflict-averse. Individuals who experience the IP may seek to avoid conflicts as they fear that being wrong may expose them to fraud, further reinforcing their feelings of inadequacy. Chrisman *et al.* (1995) found that individuals with IP may engage in self-sabotaging behaviours such as procrastination and perfectionism, leading to a lack of productivity and missed deadlines. These

behaviours can also lead to avoiding conflicts or delegating decision-making responsibilities to others.

Impostors may exhibit traits of being cooperative and conflict-averse; these traits can be attributed to a fear of failure and the constant pressure to maintain their image of competence. Research has shown that impostors often have low self-esteem and high anxiety levels, which can lead to a preference for cooperative and harmonious interactions over conflict or competition (Ross & Krukowski, 2003). Impostors fear being exposed as a fraud and believe that their success is based on luck or external factors rather than their abilities. These beliefs can lead to a lack of confidence in one's abilities, causing individuals to avoid situations where they might be challenged or judged (Clance & O'Toole, 1987).

Research by Neff and Karney (2005) found that individuals with IP use avoidance coping strategies to manage their anxiety and self-doubt, which can manifest as a tendency to avoid conflict or confrontation. Impostors may be overly agreeable and eager to please others to avoid being accused of fraud. They seek approval from others and avoid situations where they might be judged or evaluated (Schubert & Bowker, 2019). In addition, Cokley *et al.* (2013) found that impostors tend to have a heightened sense of social connectedness and a strong desire to belong. This desire to belong may lead individuals with IP to prioritise social harmony and cooperation over competition or conflict to maintain social relationships and avoid the perceived feelings of social rejection or isolation.

On the Alienation sub-scale, participants reported a mean score of 37.54 (SD = 21.56). This score indicates moderate feelings of being disconnected from others: The minority of the respondents in this study have low impostor tendencies; therefore, they were unlikely to have a sense of unreliability and a propensity for image control. Individuals who experience the IP often fear being exposed to fraud; therefore, they may behave to maintain a specific image and avoid being seen as incompetent or fraudulent. The literature found that individuals with impostor tendencies often experience feelings of inadequacy, which can lead to a need to control their image. These individuals tend to be highly self-critical and may go to great lengths to maintain the appearance of competence to avoid being exposed to fraud (Clance & Imes, 1978). Cokley *et al.* (2013) found that individuals with IP tend to engage in image control behaviours, such as presenting a perfect image to others and avoiding situations where they may be evaluated. These individuals avoid risks and may not pursue opportunities for fear of failure or being exposed to fraud.

Impostorism has been linked to perfectionism which fuels self-doubt, the dread of failure, and alienation (LaDonna *et al.*, 2018). Self-doubt is a dual-edged force that can motivate someone to perform better or cause them to overwork, over-prepare, or give up on an activity (Persky, 2018). Impostor feelings lead to inaccurate self-evaluation. This kind of evaluation applies to individuals who do not have an innate feeling of accomplishment. Many individuals feel they lack the required knowledge or skills when the impostor effect happens. Withdrawing from activities may allow an impostor to protect themselves from the exposure of their perceived inability to perform. It, however, may also lead to loneliness within a group.

Due to a lack of internalisation of previous accomplishments, an external locus of control, and a lack of self-confidence, impostors focus on image maintenance and self-monitoring behaviours. (Cowman & Ferrari, 2002; Kumar & Jagacinski, 2006; Kumari *et al.*, 2019; Sakulku, 2011). Research by Vergauwe *et al.* (2015) found that individuals with IP experience feelings of shame and guilt, leading to feeling disconnected from others. Individuals tend to be highly self-critical and may feel they do not deserve their accomplishments, which can lead to a distorted self-image. Maintaining a false facade becomes a significant worry for individuals who experience the IP. Therefore, they are more likely to engage in impression management behaviours such as self-promotion or withholding information to establish a favourable image.

6.2.2 Self-esteem levels of managers/leaders

The statistics on self-esteem indicate that, on average, participants had moderate self-esteem. Data findings showed that the participants had scores ranging from 10 to 40, with a mean score of 18.64 (SD = 5.738). The minimum score of 10 suggests that individuals in the sample had low self-esteem, while the maximum score of 40 indicates that some individuals may have high self-esteem. The average self-esteem score of 18.64 falls within the middle range of the possible scores and suggests that, on average, participants had moderate self-esteem. The standard deviation of 5.738 suggests some variability in self-esteem scores, with some participants having scores relatively far from the mean. Research has shown that individuals with high self-esteem are more resilient and better able to cope with stress and adversity (Orth *et al.*, 2008). According to researchers, self-esteem is a socially defined emotion that refers to a person's various self-concepts and self-images that are motivated by the mental need for connection and acceptance within a social group as well as the desire for effective and consistent functioning, knowledge, and achievement in comparison to other group members (Battle, 1992; Baumeister & Leary, 1995; Coetzee *et al.*, 2006). Individuals with high self-esteem feel positive about themselves regardless of their abilities, talents and other characteristics. Individuals with low self-esteem, in contrast,

have no confidence in themselves even if they are competent (Chen *et al.*, 2004; Park *et al.*, 2018).

Individuals with higher self-esteem levels are more likely to set and achieve realistic goals, take on challenges, and persist in the face of failure (Baumeister *et al.*, 2003). Furthermore, individuals with high self-esteem are likelier to have positive social interactions and maintain healthy relationships (Leary & Baumeister, 2000). They can better communicate their needs and assert themselves respectfully, leading to positive relationship outcomes. They are also more likely to engage in negative behaviours such as substance abuse and risk-taking behaviours (Baumeister *et al.*, 2003). Individuals with low self-esteem are at risk of developing mental health problems such as depression and anxiety (Orth *et al.*, 2010).

Although empirical research on the relationship between the IP and self-esteem has yielded mixed results, self-esteem is central to the IP (Harvey, 1981; Schubert & Bowker, 2019; Topping, 1983). Impostorism harms self-esteem, leading to insecurity (Schubert & Bowker, 2019). Self-esteem has a significant impact on both leadership and the IP. According to Landford and Clance (1993), impostors lack the environment necessary to develop self-assurance; therefore, they desire an idealised version of themselves. Healthy self-esteem is characterised by positive value beliefs that fluctuate in response to changing conditions and do not require ongoing reassurance and defence (Schubert & Bowker, 2019). Therefore, those with healthy self-esteem are less susceptible to self-esteem-related issues and do not need to justify their value.

It appears that self-preservation and self-improvement motivate the actions of impostors. Unlike those with impostor symptoms, individuals with consistent self-esteem frequently value and accept themselves without condition. Particularly, impostors endeavour for high levels of individual accomplishment to justify illusions of intellectual talent (Langford & Clance, 1993). Thus, impostors avoid situations that could result in negative feedback regarding their competence (Dudău, 2014; Ross & Krukowski, 2003). According to research, the IP is influenced by low self-esteem, which is more prevalent in individuals with low self-esteem (Schubert & Bowker, 2019). Impostors rely on perfectionist work practices to avoid making errors, as these practices safeguard their self-esteem (Schubert & Bowker, 2019). When confronted with success, impostors tend to handicap themselves. They provide tactical justifications for failure. Their sense of competence increases temporarily when they succeed in talents, and perceived self-efficacy impacts impostors, which are components of self-esteem based on competence and self-efficacy (Want & Kleitman, 2006). The competence efficacy-based self-esteem component focuses on

how individuals perceive and value their talents (Gecas & Schwalbe, 1983; Owens, 1994; Rosenberg *et al.*, 1995).

6.2.3 Decision-making self-efficacy levels of managers/leaders

The statistics on MDMSE indicate that, on average, participants had relatively high decision-making skills. The sub-scales indicate that respondents could manage their emotions and engage in creative thinking, sometimes struggling with logical reasoning and problem-solving but can persuade and influence others. The findings indicated that MDMSE scores ranged from a minimum of 25 to a maximum of 100. The mean score for the MDMSE measure was 79.18 (SD = 10.15), indicating that, on average, participants had relatively high MDMSE skills. Scores on the MDMSE sub-scales were as follows: Thought and affect control ranged from 33.33 to 100 (M = 79.12, SD = 11.20). Exploratory Search and Processing Efficacy ranged from 62.50 to 100 (M = 82.65, SD = 10.86). Analytical and Inferential Efficacy ranged from 30 to 100 (M = 77.79, SD = 12.10), and Social Influence Efficacy ranged from 25 to 100 (M = 77.49, SD = 12.75). These results provide valuable information about the MDMSE skills of the sample.

The mean score of 79.18 on the MDMSE measure suggests that participants had higher MDMSE skills than the scale's midpoint. The standard deviation of 13.14 indicates some variability in scores, with some participants scoring higher or lower than the mean. The relatively high mean scores for Thought and Affect Control and Exploratory Search and Processing Efficacy suggest that participants could manage their emotions and engage in creative thinking. The mean analytical and inferential efficacy score indicates that participants may struggle with logical reasoning and problem-solving. In contrast, the mean score for Social Influence Efficacy suggests that participants could persuade and influence others.

The thought and affect control scores ranged from 33.33 to 100 (M = 79.12, SD = 11.20). Individuals, like the respondents, who possess high levels of thought and affect control have been shown to exhibit more significant levels of emotional regulation, resilience, and adaptive coping strategies in response to stressful situations: suggesting participants could manage their emotions. Individuals who manage their emotions are more likely to experience positive outcomes in their personal and professional lives. Gross and John (2003) found that individuals who could regulate their emotions more effectively had better psychological and physical health outcomes. They also found that individuals who engaged in cognitive reappraisal, which involves reframing a situation in a more positive light, were less likely to experience negative emotions and were more likely to report positive outcomes. Individuals with higher levels of thought and affect control

are likelier to exhibit adaptive coping strategies in response to stress. Research by Connor-Smith and Flachsbart (2007) found that individuals who possessed greater levels of cognitive and emotional regulation were less likely to use avoidance coping strategies and were more likely to use problem-focused coping strategies. In addition, individuals with high levels of thought and affect control are more likely to exhibit resilience in response to adverse life events. Research by Tugade and Fredrickson (2004) found that individuals with greater levels of emotional regulation were more likely to experience positive emotions in the aftermath of a stressful event and were better able to recover from the event.

Managing emotions is an essential skill for individuals because it can significantly impact their well-being, relationships and overall success in life. Emotions can be powerful and influence our thoughts, behaviours and decisions. If not managed effectively, they can lead to negative consequences such as stress, anxiety, depression and conflict with others (Gross & John, 2003). Effective emotional management includes the ability to recognise, understand, and regulate one's emotions and empathise with and manage the emotions of others (Goleman, 1995). Research has shown that individuals who can effectively manage their emotions have better mental and physical health, stronger relationships, and are more successful in their personal and professional lives (Fredrickson *et al.*, 2003). Managing emotions is essential in the workplace as well. Research has shown that employees who manage their emotions are more productive, have better job satisfaction, and are less likely to experience burnout (Grandey, 2000). Emotionally intelligent leaders are also more effective in managing teams and creating a positive work environment (Perloff, 1997).

The Exploratory Search and Processing Efficacy scores ranged from 62.50 to 100 ($M = 82.65$, $SD = 10.86$). This sub-scale suggests respondents had relatively high MDSE abilities: This sub-scale suggests respondents had relatively moderate abilities in Exploratory Search and Processing Efficacy, suggesting that participants could engage in creative thinking. Exploratory Search and Processing Efficacy refers to an individual's confidence in their ability to search for and process information in an exploratory manner. Individuals with high levels of Exploratory Search and Processing Efficacy are likely to engage in more extensive information search and processing, leading to better decision-making outcomes, and are more likely to engage in information search behaviour when faced with complex and novel problems. These individuals are also more likely to use various sources and strategies to gather information, which can lead to more diverse and comprehensive knowledge. Creative thinking involves the ability to generate novel and valuable ideas and the flexibility to combine and recombine ideas in new and innovative ways (Sawyer, 2011). Innovative thinking is essential for individuals because it enables them to

generate new ideas, solve problems and adapt to changing circumstances. Research has shown that innovative thinking can lead to many positive outcomes. For example, individuals who engage in innovative thinking are more likely to be innovative, adaptable and able to overcome obstacles and challenges (Amabile, 1983; Sternberg & Davidson, 2005). Creative thinking can also improve mental health and well-being by reducing stress, enhancing mood, and increasing overall life satisfaction (Fredrickson, 2001). Creative thinking is essential in the workplace. In today's fast-paced and rapidly changing economy, organisations need employees who can think creatively and develop new ideas to drive innovation and growth. Creative thinking can also lead to better problem-solving and decision-making and increased productivity and job satisfaction (Shalley & Gilson, 2004).

The Analytical and Inferential Efficacy scores ranged from 30 to 100 ($M = 77.79$, $SD = 12.10$). This sub-scale suggests respondents had relatively moderate abilities in Analytical and Inferential Efficacy, suggesting that participants do not struggle with logical reasoning and problem-solving. Individuals with high Analytical and Inferential Efficacy levels tend to have strong problem-solving skills and can think critically and logically about complex issues. Individuals are more likely to succeed academically and professionally. Individuals with high levels of analytical efficacy perform better on complex cognitive tasks, such as problem-solving and decision-making are also likelier to engage in strategic thinking and planning. Analytical and Inferential Efficacy also strongly influence academic achievement. Students with high Analytical and Inferential Efficacy levels are likelier to succeed academically and achieve higher grades (Zimmerman & Kitsantas, 2014). Practical problem-solving skills can help individuals to overcome obstacles, make better decisions and achieve their goals. Strong problem-solving skills are essential for individuals because they can navigate challenges and find practical solutions in various aspects of life, from personal to professional contexts. Research has shown that individuals with strong problem-solving skills tend to have better mental health and well-being, including lower levels of anxiety and depression (Heppner & Krauskopf, 1987). In the workplace, problem-solving skills are highly valued by employers. Individuals who can identify problems, analyse situations and develop practical solutions are more likely to succeed and advance in their careers. Moreover, individuals with strong problem-solving skills are more likely to be innovative and adapt to changing circumstances, which is essential in today's fast-paced and complex business environment (Nezu & D'Zurilla, 2006).

Social Influence Efficacy refers to an individual's belief in their ability to influence others effectively in social situations. The Social Influence Efficacy scores ranged from 25 to 100 ($M = 77.49$, $SD = 12.75$), indicating that participants could persuade and influence others. This sub-scale suggested

that respondents had relatively high abilities in Social Influence Efficacy and were likely to be effective communicators and leaders. Stankovic and Luthans (2003) found that Social Influence Efficacy is positively related to leadership effectiveness. Individuals with high levels of Social Influence Efficacy are more likely to be perceived as influential leaders by their subordinates. Another study by DeRue and Ashford (2010) found that Social Influence Efficacy is positively related to job performance. Individuals with high levels of Social Influence Efficacy are more likely to influence others successfully in the workplace, which leads to better job performance. The ability to persuade and influence others is essential for individuals in various contexts, from personal relationships to professional settings. Effective persuasion and influence can help individuals to build stronger connections with others, gain support for their ideas, and achieve their goals. Research has shown that individuals skilled at persuasion and influence tend to be more successful in their careers and personal lives. For example, individuals who can effectively negotiate and persuade others are more likely to advance in their careers and achieve higher levels of success (Lewicki *et al.*, 2010). Moreover, persuasive and influential individuals can better navigate conflict and achieve positive outcomes. They can communicate their needs and desires effectively, negotiate solutions to problems, and build collaborative relationships with others (Cialdini, 2007). Developing firm persuasion and influence skills requires individuals to understand how to effectively communicate with others, identify the needs and desires of their audience, and tailor their messages accordingly (Cialdini, 2007). It also requires individuals to build trust with others, maintain a positive attitude and be persistent in their efforts to achieve their goals.

6.2.4 Innovative work behaviour levels of managers/leaders

Descriptive statistics for this study's five factors of IWB indicated that respondents moderately explored opportunities and generate, promote, realise and sustain ideas. These findings suggest that participants were engaged in each stage, but there was some inconsistency in their engagement levels. The descriptive statistics for this study's five factors of IWB showed that participants were, on average, moderately engaged in each stage. The IWB scores ranged from a minimum of 1 to a maximum of 5. The mean score for Opportunity Exploration was 4.18 (SD = 0.86), indicating that participants tended to explore opportunities for innovation moderately.

Similarly, the mean score for idea generation was 3.99 (SD = 0.76), indicating that participants tended to generate ideas moderately. The mean score for Idea Promotion was 4.03 (SD = 0.81), indicating that participants tended to promote ideas to a moderate extent. The mean score for Idea Realisation was 4.05 (SD = 0.88), indicating that participants tended to realise ideas moderately.

Finally, the mean score for Idea Sustainability was 4.01 (SD = 0.81), indicating that participants tended to sustain ideas moderately.

The mean score for Opportunity Exploration was 4.18 (SD = 0.86), indicating that participants tended to explore opportunities for innovation moderately. This refers to the individual's search for new ideas, technologies and market opportunities. Individuals with a proactive personality are more likely to explore opportunities (Crant, 2000; Parker *et al.*, 2010). Proactive individuals take the initiative and seek out opportunities for change and improvement. They are more likely to be curious and willing to take risks, which makes them more open to exploring new ideas and opportunities. In addition to personality traits, research has also found that specific individual characteristics, such as learning orientation and creativity, are positively related to Opportunity Exploration (Hmieleski & Corbett, 2008). Learning orientation refers to the individual's desire and ability to learn and develop new skills and knowledge. Individuals with a strong learning orientation are more likely to seek new information and learning opportunities. Innovation allows individuals to develop new solutions to existing problems, identify emerging trends and create new products or services that positively impact society. Exploring opportunities for innovation is essential for individuals in various contexts, from personal creativity to professional growth.

Research has shown that innovative and entrepreneurial individuals are more successful in their careers and personal lives. For example, individuals who can identify new opportunities and develop innovative solutions are more likely to advance in their careers and achieve higher levels of success (Shane & Venkataraman, 2000). Similarly, individuals who are innovative in their personal lives are more likely to experience personal growth and fulfilment.

Innovative work behaviour (IWB) is essential for organisations to remain competitive and adapt to rapidly changing environments. Generating new ideas is a critical component of IWB, and individual factors play a crucial role in idea generation. The mean score for idea generation was 3.99 (SD = 0.76), indicating that participants tended to generate ideas moderately. Individual characteristics such as personality, motivation and creativity can influence idea generation within IWB. Individuals who score high on openness to experience, risk-taking and creativity are likelier to engage in idea generation (De Jong & Den Hartog, 2010; Janssen, 2000). The individual factors that can influence idea generation are knowledge and expertise. Research has shown that individuals with diverse knowledge and expertise are more likely to generate innovative ideas (Janssen, 2000; Reiter-Palmon & Illies, 2004). Furthermore, research has shown that intrinsic motivation, or the desire to engage in an activity for its inherent enjoyment or satisfaction, can also promote idea generation within IWB (Amabile, 1988; Oldham & Cummings, 1996). In

contrast, extrinsic motivators such as rewards or pressure from superiors may hinder idea generation by reducing creativity and intrinsic motivation (Amabile *et al.*, 1996; Deci *et al.*, 1999). Idea generation is an essential aspect of leadership. Leaders who generate and implement new ideas can create a culture of innovation within their organisations, leading to tremendous success and growth (Jung *et al.*, 2003). Developing strong idea-generation skills requires individuals to be curious, open-minded and willing to take risks. It also requires thinking outside the box, seeing problems from multiple perspectives, and connecting seemingly unrelated concepts. In addition, idea generation is closely linked to creativity, which has been shown to have numerous benefits for individuals, including increased well-being, greater resilience, and improved cognitive functioning (Fredrickson, 2001).

Idea promotion refers to advocating for and promoting new ideas within an organisation or group. It involves identifying promising ideas, building stakeholder support and advocating for the resources necessary to develop and implement the idea. Effective idea promotion requires a combination of strong communication and interpersonal skills, as well as a deep understanding of the needs and priorities of the organisation. Idea promoters must clearly articulate the value and potential impact of the idea while also addressing any concerns or objections that may arise. The mean score for Idea Promotion was 4.03 (SD = 0.81), indicating that participants tended to promote ideas to a moderate extent. Specific individual characteristics, such as proactive personality and task significance, are positively related to promoting new ideas in the workplace. A proactive personality refers to an individual's tendency to take the initiative, identify opportunities for change and actively pursue them. Proactive individuals are more likely to generate and promote new ideas in the workplace, as they are not afraid to challenge the status quo and take risks to achieve their goals. Research by Scott and Bruce (1994) found that a proactive personality was positively related to IWB among employees. Recognition and rewards for IWB can also motivate individuals to engage in innovative behaviour and promote their ideas within the organisation. Research by Hirst *et al.* found that employees who promoted ideas were perceived as more innovative by their colleagues and supervisors. These employees were more likely to be seen as leaders within the organisation (Hirst *et al.*, 2011). Individuals promoting ideas are likelier to be seen as leaders and positively influence the organisation's culture and climate. Leaders who provide a supportive and empowering work environment are likelier to inspire their employees to generate and promote new ideas. Task significance refers to an individual's perception of the importance and impact of their work on others. Research by Amabile *et al.* (1996) found that employees who perceived their work as having high task significance were likelier to engage in innovative problem-solving and

innovation. Individuals who perceive their work as having high task significance are more likely to engage in IWB, as they are motivated to impact their colleagues, customers, or society positively.

Individuals play a critical role in IWB, as their creativity and willingness to take risks are essential in realising innovative ideas. The mean score for Idea Realisation was 4.05 (SD = 0.88), indicating that participants tended to realise ideas moderately. This sub-scale suggests that respondents are moderately engaged in Idea realisation. Individuals also play a crucial role in realising innovative ideas. Carmeli *et al.* (2006) found that individuals with high job autonomy and more self-determined levels were more likely to translate their innovative ideas into actual products or procedures. This suggests that having the freedom and resources to pursue innovative ideas is essential for realising their potential.

Research has shown that more proactive, adaptable and innovative individuals are more likely to engage in IWB. For example, research by Shin and Zhou (2007) found that employees who scored high on creativity, proactive personality, and learning orientation were likelier to engage in IWB. Another study by Scott and Bruce found that employees more willing to take risks were more likely to generate innovative ideas (Scott & Bruce, 1994). Individuals who realise their ideas are likelier to experience achievement, pride and motivation. This, in turn, can lead to higher levels of job satisfaction, engagement and creativity (Amabile, 1997). It is essential to note that individual characteristics are not the only factors influencing IWB. Organisational factors such as leadership support, resources and culture also play a significant role. For example, research by Wang and Rode (2010) found that leadership support and resources were positively related to innovative work behaviour.

Sustainability has become a crucial issue for businesses and organisations across the globe. In today's dynamic and highly competitive business environment, innovation is considered one of the critical drivers of sustainable business success. Innovation requires individuals to engage in IWB, which refers to continuously generating, promoting and realising novel and valuable ideas within an organisation. The mean score for Idea Sustainability was 4.01 (SD = 0.81), indicating that participants tended to sustain ideas moderately. Innovative work behaviour (IWB) is critical to organisational success, particularly in today's rapidly changing business environment. The sustainability of IWB is essential for ensuring long-term organisational success, and individuals play a crucial role in driving sustainable innovation within organisations. Individuals who engage in IWB are often more motivated and committed to their work, which can positively impact the sustainability of innovative work behaviour. According to the self-determination theory, intrinsically motivated individuals, i.e. driven by internal factors such as enjoyment and personal growth, are

more likely to engage in innovative work behaviour and sustain their efforts over time (Ryan & Deci, 2000).

Research by Zhou and George (2003) found that individuals with high creative self-efficacy are likelier to engage in IWB and generate innovative ideas. Moreover, individuals with solid creativity and problem-solving skills are more likely to engage in IWB, as they are better equipped to generate new ideas and solutions. In addition to individual characteristics, the organisational context plays a crucial role in sustaining IWB. For example, organisations that encourage and support innovation, provide resources and opportunities for experimentation, and recognise and reward innovative efforts, are more likely to sustain IWB over time (Amabile *et al.*, 1996; Scott & Bruce, 1994). Individuals also play a crucial role in promoting sustainability in IWB. Hahn *et al.* (2010) found that highly environmentally conscious individuals are likelier to engage in sustainable innovation activities. These individuals are motivated by a sense of responsibility to the environment and a desire to make a positive impact.

The following section presents the reliability and validity of the instruments used in this research.

6.3 RELIABILITY AND VALIDITY OF THE IMPOSTOR PHENOMENON, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR MEASURING INSTRUMENTS

The second objective was to determine if the Impostor Phenomenon, self-esteem, decision-making self-efficacy and IWB measuring instruments were reliable and valid in South Africa. Validity was confirmed by means of a CFA on instruments with the following fit indices: CFI, χ^2 value/ degrees of freedom and RMSEA. This is further supported by standardised (regression) coefficients, PTV and factor loadings.

As discussed in Section 4.9 and Section 5.4, these methods were used to support the findings for Research Objective 2: To evaluate the validity and reliability of the measuring instruments for impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour in the South African context.

6.3.1 Reliability of the Instruments

Table 6.1 provides the Cronbach's Alpha coefficients results for the different sub-scales from this study. As seen from this table, the Cronbach Alpha coefficients for all the sub-scales ranged from .86 to .98. which can be deemed very good.

Table 6.1: Cronbach Alphas of Research Measuring Instruments

SCALE	CRONBACH'S ALPHAS FOR THIS STUDY
Impostor Phenomenon	.926
1 Competence Doubt	.913
2 Working Style	.791
3 Alienation	.601
4 Other-self divergence	.765
5 Ambition	.699
6 Need for Sympathy	.713
Self-Esteem	.858
Managerial Decision-Making Self-Efficacy	.951
1 Thought and affect control	.909
2 Exploratory Search and Processing Efficacy	.912
3 Analytical and inferential efficacy	.681
4 Social Influence Efficacy	.822
Innovative Work Behaviour	.977
1 Opportunity Exploration	.938
2 Idea realisation	.904
4 Idea promotion	.933
5 Idea generation	.935
6 Idea sustainability	.920
Valid N (listwise)	616

The Cronbach's Alpha coefficients for all the sub-scales of the IP ranged from .601 for Alienation to .913 for Competence Doubt. The full scale had a α of .926, which can be seen as very good. The self-esteem scale had an α of .858, which can be seen as good. Regarding MDMSE, the α for all the sub-scales ranged from .681, Analytical and Inferential Efficacy, to .912, Exploratory Search and Processing Efficacy. The full scale had an α of .951, which is very good. For IWB, the α for all the sub-scales ranged from .904, Idea Realisation, to .938, Opportunity Exploration.

The primary constructs of this study were the IP, self-esteem, MDMSE and IWB. Each construct was evaluated using existing questionnaires developed by reputable scholars. Previous studies confirm this questionnaire's reliability.

Table 6.2: Comparison of the Cronbach alpha Scales of original studies.

SCALE	α for this study	α for the original studies
Impostor Phenomenon	.926	.920
Self-Esteem	.858	.920
Managerial Decision-Making Self-Efficacy	.951	.870
Innovative Work Behaviour	.977	.870

Table 6.2 presents the α from this study compared to the original studies. The Impostor-Profile (IPP31) questionnaire establishes if a leader is experiencing characteristics of the IP (Ibrahim *et al.*, 2021). As seen in Table 6.2, the α for the original study indicates a score of .920, As this study

presented a score of .926, both can be seen as good. Self-esteem was measured by the scale developed by Rosenberg (1965). As seen in Table 6.2, the α of the original study indicates a score of .920; the current study presented a score of .858, so both can be seen as good. The Decision-Making Self-Efficacy Questionnaire evaluates the self-efficacy of a leader in making managerial choices (MDMSEQ) (Myburgh *et al.*, 2015). As seen in Table 6.2, the α of the original study indicates a score of .870; as the current study presented a score of .951, both can be seen as good. The IWB Scale assesses leaders' IWB. This scale elicits multidimensional measurements of an individual's innovative behaviour (Ayoub *et al.*, 2021). As seen in Table 6.2, the α for the original study indicated a score of .870 while the current study presented a score of .977, both of which can be seen as good.

Based on the findings of this analysis and the comparison of original instrument scores, it can be concluded that the IP, self-esteem, MDMSE and IWB measuring instruments are reliable in South Africa.

6.3.2 Validity of the Instruments

The following section presents the findings on the validity of the instruments used in this study.

As seen in Table 6.3, the correlational values of the instruments range from .709 to .943, which were fairly high.

Table 6.3: Summary of the validity scores instruments.

AREA	IMPOSTOR PHENOMENON SCALE	SELF-ESTEEM SCALE	MDMSE SCALE	INNOVATIVE WORK BEHAVIOUR SCALE
Correlational values scale	.780 to.943.	.709 to.943.	.788 to.736	.788 to.909
χ^2 value	CMIN = 4.531	CMIN = 12.811 * weak model fit	CMIN = 5.013	CMIN = 5.293
Baseline Comparisons	CFI =.883	CFI =.818	CFI =.854	CFI =.920
RMSEA	LO 90:.072 Hi 90:.080 PCLOSE:.000	LO 90:.127 Hi 90:.150 PCLOSE:.000	LO 90:.077 Hi 90:.084 PCLOSE:.000	LO 90:.080 Hi 90:.088 PCLOSE:.000
Bartlett's test of sphericity	n/a	$X^2 = 2299.968$; DF = 45; p =.000	n/a	n/a
Kaiser-Meyer-Olkin (KMO)	n/a	.875	n/a	n/a

AREA	IMPOSTOR PHENOMENON SCALE	SELF-ESTEEM SCALE	MDMSE SCALE	INNOVATIVE WORK BEHAVIOUR SCALE
Communalities: Self-esteem model scale	n/a	452 to.574,	n/a	n/a

In terms of the model fit summary of the instrument, also presented in Table 6.3, the following can be concluded. The χ^2 values of the models for the Impostor Phenomenon, the MDMSE and the IWB scale, are a good model fit. The χ^2 value of the self-esteem model represented a weak model fit. Based on the CFI and RMSEA reported in this section, the self-esteem instrument employed in this study did not demonstrate construct validity; hence additional tests were performed. Exploratory factor analysis was utilised to confirm whether one factor represented the phenomenon's underlying theoretical framework. The sphericity test by Bartlett for the self-esteem scale was statistically significant, indicative of a strong enough relationship between variables to support EFA. The KMO sampling adequacy metric produced a value of .875, indicating an adequate sample size. Considering the KMO and Bartlett's Test and the total variance of this self-esteem scale, factor analysis can be accepted as valid.

The CFIs of these instruments, as presented in Table 6.3, are acceptable regarding baseline comparisons. The root means a square error of estimate of the instruments, as presented in Table 6.2 above, indicating a good fit. The instruments used in this study are valid based on the standard regression weights, correlations of sub-indexes, Chi-square value, CFI and root mean square error presented in this section.

The second research objective was to determine if the IP, self-esteem, MDMSE, and IWB measuring instruments are valid and reliable in South Africa. Based on the findings of this analysis and the comparison of original instrument scores, it can be concluded that the IP, self-esteem, MDMSE and IWB measuring instruments are valid and reliable in South Africa. Therefore, the alternative hypothesis "H_a: The impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour measuring instruments are valid and reliable in South Africa" fails to be rejected.

The following section addresses the research objective to establish whether the constructs differed between gender, age groups, qualification level, years of experience, managerial levels and sectors.

6.4 DIFFERENCES IN THE IMPOSTOR PHENOMENON, SELF-ESTEEM, DECISION-MAKING SELF-EFFICACY AND INNOVATIVE WORK BEHAVIOUR BETWEEN GENDER, AGE GROUPS, QUALIFICATION LEVEL, YEARS OF EXPERIENCE, MANAGERIAL LEVELS AND SECTORS

As discussed in Section 4.9 and Section 5.5, Spearman's rank correlations, t-tests and Cohen's d were used to support the findings for Research Objective 3, which was to determine if there were differences in the IP, self-esteem, MDMSE and IWB between gender, age groups, qualification level, years of experience, managerial levels and sectors.

The data findings are presented in the next section, describing differences in each construct. Extracts from the literature are used to support these findings. The first section discusses the differences in gender, age groups, qualification level, managerial/leadership experience, managerial/leadership role and sector. All constructs in this study significantly correlated with age, highest qualification, managerial experience and role. The IP relationship indicated an inverted relationship. Thus, if factors presented a low index, the respondent's impostor tendencies were higher. The remaining constructs had a direct relationship. The correlational statistics in Table 6.3 further indicate that these constructs have a small to medium relationship between gender, age group, highest qualification, managerial experience, managerial/leadership role and sector. These relationships are elaborated on in the section below.

6.4.1 Differences in Impostor Phenomenon Between Gender, Age Group, Qualification Level, Years of Experience, Managerial/Leadership Role and Sector

The Impostor Phenomenon had a more significant impact on the female sample ($M = 38.24$, $SD = 19.50$) than on men ($M = 37.13$, $SD = 18.18$). The t-p value indicated a score of .743, while Cohen's d-test indicated a score of -.06. This resulted in the p-value of .743, which was above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. According to Cohen's $d = -0.6$, the practical effect is small. These findings suggest that female respondents reported a higher variation in the impostor phenomena than male respondents. Statistical findings indicated a significant probability that the relationship between the IP and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the tiny effect size, the variance in the association between gender and the IP has limited practical applicability in real-life situations.

While the phenomenon can affect anyone regardless of gender, it may significantly impact women. Several studies have found that women are likelier to experience IP tendencies than men. Women tend to experience more intense self-doubt and anxiety related to their abilities and achievements than men. Several factors may contribute to the gender gap in this phenomenon. One is gender stereotypes that suggest women should behave in a specific manner; these stereotypes can lead women to doubt their abilities and feel like they are not living up to expectations. Another factor is the under-representation of women in specific fields, which can make women feel like they do not belong or are not qualified to be there. It is worth noting that IP is a complex phenomenon, and its impact can vary depending on individual and contextual factors. While women may be more likely to experience the IP, it is essential to recognise that men can also struggle with these feelings of self-doubt and inadequacy.

The IP construct, Competence Doubt, had a more significant impact on the female sample ($M = 35.43$, $SD = 23.27$) than on men ($M = 32.89$, $SD = 21.81$). The t-p value indicated a score of .169, while Cohen's d-test indicated a score of -.11. This results in a p-value of .165, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = -.11$, which these criteria define as small. These findings suggest that female respondents reported a higher variation in the construct of Competence Doubt than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variable exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

Women are more likely to experience IP than men, especially in male-dominated fields such as science, technology, engineering, and mathematics. This may be due to societal stereotypes and expectations that women are less competent than men and the lack of female role models in these fields. Additionally, women may internalise negative feedback more strongly than men, leading to incredible self-doubt and impostor feelings. This can be compounded by workplace cultures that are not supportive or inclusive of women. One factor is gender stereotypes, which are deeply ingrained in our society and often portray men as confident, assertive, and competent. At the same time, women are seen as more emotional, nurturing, and less capable. These stereotypes can influence how individuals perceive and evaluate men and women in the workplace, leading to women being judged more harshly and having their competence questioned more frequently than men. Furthermore, women often face more challenges and barriers in their careers than men, such as discrimination, unequal pay, and a lack of access to leadership roles.

These obstacles can create a sense of insecurity and self-doubt, leading women to question their abilities and qualifications (Ashiq & Warraich, 2023).

On the Working Style sub-scale, participants reported a mean score indicating a tendency towards perfectionism and overworking. The IP construct, Working Style, had a more significant impact on the female sample ($M = 33.72$, $SD = 26.37$) than on men ($M = 33.72$, $SD = 26.37$). The t-p value indicated a score of .819, while Cohen's d-test indicated a score of -.02. This results in the p-value of .819, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = -0.2$, suggested a small effect. These findings suggest that female respondents reported a higher variation influenced by the construct, Working Style, than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

IP may significantly impact women's tendency toward perfectionism and overworking. This phenomenon elevates feelings of fraudulence, despite evidence of success and competence. This feeling can lead individuals to overwork themselves, striving for perfection to prove their worth and avoid being exposed as fraud. Studies have found that women are more likely to experience the IP than men, particularly in male-dominated fields or positions of leadership. Women may feel they need to work harder and be perfect to prove their competence in these environments, leading to overworking and burnout.

Moreover, societal expectations and stereotypes about gender roles can contribute to the IP in women. For example, women are often expected to be nurturing and caring and may feel like they are not living up to these expectations if they focus on their careers. This can lead to guilt and self-doubt, exacerbating the IP. Overall, while the IP can affect individuals of any gender, it may have a more powerful impact on women's tendency towards perfectionism and overworking.

Another potential explanation is related to the impact of systemic discrimination and gender bias on women's experiences in the workplace. Women may feel they need to work harder and strive for perfection to prove themselves and overcome barriers to career advancement. Additionally, women may face more pressure to juggle multiple roles, such as caregiving and household responsibilities, leading to a greater sense of overwhelm and the need to overwork to manage competing demands. Finally, individual personality factors may contribute to women's tendencies

towards perfectionism and overworking, such as a high need for achievement or a strong work ethic. However, it is essential to note that these factors are not specific to women and can also be exhibited by men.

On the Alienation sub-scale, participants reported a mean score indicating moderate feeling disconnected from others. The Impostor Phenomenon construct, Alienation, had a more significant impact on the men's sample ($M = 37.65$, $SD = 21.33$) than on females ($M = 37.25$, $SD = 21.74$). The t -p value indicated a score of .818, while Cohen's d -test indicated a score of .02. This results in the p -value of .818, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = 0.2$, which is defined as small. These findings suggest that male respondents reported a higher variation influence by the construct Alienation than female respondents. Statistical findings indicated a significant probability that the relationship between this construct, alienation and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

Feelings of alienation can affect both men and women, but research suggests that men may experience it more often and intensely than women. There are several potential reasons for this: In traditional gender roles, men are often expected to be independent, self-reliant, and emotionally stoic, which can make it more difficult for them to reach out for support when they are feeling disconnected or isolated. Conversely, women are often socialised to be more expressive and emotionally connected, which may make it easier for them to seek out social connections and emotional support. Men often have less support and may have fewer social connections or less social support than women. They may be less likely to have close friendships or confidants and may rely more heavily on their romantic partners for emotional support. Men may feel isolated and disconnected when these relationships are strained or end. Men may experience more pressure to succeed in their careers and prioritise work over social relationships or self-care, leading to disconnection and alienation. Conversely, women may emphasise nurturing relationships and maintaining a work-life balance. Men may be more hesitant to seek help for mental health concerns due to stigma and social norms around masculinity. This can make it more difficult for them to address feelings of alienation or other mental health issues.

Participants reported a mean score indicating moderate feeling disconnected from their true selves on the Other-Self Divergence sub-scale. Cohen's $d = -.06$, which these criteria define as

small. Cohen's indicated a score of -0.6, which these criteria define as small. The IP construct, Other-Self-Divergence, had a more significant impact on the female sample ($M = 32.70$, $SD = 21.61$) than the male ($M = 31.37$, $SD = 21.61$). The t-p value indicated a score of .435, while Cohen's d-test indicated a score of -.06. This results in a p-value of .435, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. These findings suggest that female respondents reported a higher variation, by the construct of other-self divergence, than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

Both men and women experience the IP, there is evidence to suggest that it may have a more significant impact on women's feelings of being disconnected from their true selves. This may be due, in part, to the societal pressure placed on women to conform to specific gender roles and expectations, which can make them feel like they are not living up to their true potential or identity. Additionally, research has shown that women may be more likely than men to internalise negative feedback and self-doubt, which can exacerbate the IP. Women may also face unique challenges in male-dominated fields or workplaces, contributing to feelings of inadequacy and self-doubt. It is important to note that the IP can affect anyone, regardless of gender. It is a complex phenomenon that various factors, including personality traits, upbringing, and cultural and societal expectations, can influence.

There is a variety of factors that can contribute to women feeling less than their true selves compared to men. Some possible explanations include societal gender norms and expectations, systemic discrimination and bias, and individual psychological factors. One factor is the societal pressure on women to conform to traditional gender roles prioritising certain traits, such as nurturing, accommodating, and submission. Women may feel pressure to suppress or downplay other aspects of their personality or identity that do not fit within these gender norms, which can lead to feelings of inauthenticity or disconnection from their true selves. In contrast, men may experience less pressure to conform to traditional gender roles and may be more likely to be rewarded for assertiveness and self-promotion.

Systemic discrimination and bias can make women feel less than their true selves. Women may face barriers to opportunities and advancement in their careers or other areas of life, leading to

feelings of inadequacy or self-doubt. Additionally, women may face gender-based violence, harassment, or other forms of oppression undermining their sense of self-worth and agency. Individual psychological factors, such as a history of trauma or low self-esteem, can also contribute to women feeling less than their true selves. These factors can make asserting one's needs and desires difficult and may lead to feelings of self-doubt and insecurity.

On the Ambition sub-scale, participants reported a mean score indicating moderate levels of determination. The IP construct, Ambition, had a more significant impact on the male sample ($M = 51.83$, $SD = 23.11$) than female ($M = 50.38$, $SD = 23.11$). The t-p value indicated a score of .428, while Cohen's d-test indicated a score of .07. This results in the p-value of .428 above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .07$, which these criteria define as small. These findings suggest that male respondents reported a higher variation in the construct, of ambition, than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations. While both men and women can be ambitious, several societal and cultural factors may make men more likely to exhibit ambitious behaviours and pursue high-powered careers than women. One factor is related to traditional gender roles and expectations. Men are often socialised to be assertive, competitive, and goal-oriented, while women are expected to be nurturing and communal. These gender norms may make it more socially acceptable and encourage men to pursue high-powered careers and display ambition. At the same time, women may face more societal pressure to prioritise family and relationships over career goals. Another factor is systemic discrimination and bias's impact on women's workplace experiences. Women may face barriers to career advancement, such as gender-based discrimination and biases in hiring, promotions, and pay. These obstacles can make it more difficult for women to achieve their goals and pursue ambitious careers. Additionally, women may be more likely to prioritise work-life balance and quality of life over career success due to the disproportionate burden of caregiving and household responsibilities that often fall on women. This can make it challenging for women to balance ambitious career goals with other responsibilities and priorities. It is also important to note that individual differences in personality and values may contribute to differences in ambition between men and women. However, it is essential to consider the societal and contextual factors contributing to gender differences in ambition rather than assuming that differences are solely due to individual factors.

Participants reported a mean score indicating a moderate need for external validation on the Need for the Sympathy sub-scale. The Impostor Phenomenon construct, the *Need for Sympathy*, had a more significant impact on the female sample ($M = 49.84$, $SD = 22.93$) than the male ($M = 48.91$, $SD = 21.34$). Cohen's $d = -.04$, which these criteria define as small. The t - p value indicated a score of .607, while Cohen's d -test indicated a score of -.04. This results in a p -value of .607, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there was equality in the sample. These findings suggest that female respondents reported a higher variation in the construct and need for Sympathy than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and the IP has limited practical applicability in real-life situations.

While the IP is often associated with women, research suggests it can affect individuals of any gender. Evidence suggests that the IP may significantly impact women's external validation needs. This is because women are often socialised to seek approval and validation from others. They are more likely to attribute their successes to external factors, such as luck or help from others, rather than their abilities. Additionally, women may be more likely to experience the IP in male-dominated fields, where they may feel like they do not belong or must work harder than their male counterparts to prove themselves. This can lead to a greater need for external validation and exacerbate feelings of fraudulence. However, it is essential to note that the impact of the IP can vary from person to person and is influenced by various factors, including personality traits, cultural background, and socialisation. While both men and women can be sympathetic, some evidence suggests that women may be more likely to exhibit empathy and engage in prosocial behaviour than men. One possible explanation for this is related to gender socialisation and the roles that men and women are expected to play in society. Women are often socialised to be more nurturing, caring, and communal, while men are expected to be more independent, self-reliant, and competitive. These gender norms may create different expectations for emotional expressiveness and empathy, with women being encouraged to be more emotionally expressive and empathic.

Research has also shown that men and women may differ in how they process emotional information, with women showing greater activation in brain regions associated with empathy and emotional processing. This may suggest that women may be more naturally inclined towards empathic behaviour. However, it is essential to note that individual differences in personality, life

experiences, and cultural background can also play a role in empathy and prosocial behaviour. Gender is only one factor among many that can influence these traits. In summary, research suggests that gender can play a role in the experience of the IP. Specifically, studies have found that women are likelier to report experiencing impostor feelings than men. For example, research by Chrisman *et al.* (1995) found that women reported significantly higher levels of impostor feelings than men. Similarly, a meta-analysis by Cokley *et al.* (2013) found that women had higher levels of impostor feelings than men, although the effect size was small.

Overall, while gender does appear to play a role in the experience of the IP, the reasons for this gender difference are complex and likely involve a combination of individual and societal factors. One possible explanation for this gender difference is that societal and cultural factors may contribute to impostor feelings in women. For example, women may face more pressure to succeed. They may be more likely to attribute their successes to external factors (such as luck) rather than their abilities, which can lead to feelings of fraudulence (Clance & O'Toole, 2014).

Age and the IP significantly correlate at 0.05. The factor, Ambition showed no correlation with age. This indicated that age did not influence the respondent's desire to accomplish something exceptional. Age had a significant correlation at the 0.05 level for the Need for Sympathy. This indicates that age has a medium correlation with how respondents measured agreeableness and conflict-averseness. Age significantly correlated with Alienation Other-Self Divergence, Working Style, and Competence Doubt. This correlation was highly significant at the 0.01 level. These numerical factors indicate that age significantly correlated with how these respondents had pro- and pre-procrastination tendencies by a high or low expression. There were also significant correlations between age, and the levels of a person's self-doubt, fear of failure, and maladaptive perfectionism. This indicates a slight relationship between age and these constructs.

The literature indicates that IP affects individuals of different ages differently. The relationship between age and the IP is unclear and may depend on experience, profession, and personal characteristics. Research presented varied results. For example, research suggests that IP tendencies may decrease with age and experience studies (Bernard *et al.*, 2002; Brauer & Proyer, 2017; Brauer & Proyer, 2022; Thompson *et al.*, 1998). Other studies have found no significant relationship between age and impostor feelings. For example, research on working adults found no significant difference in impostor feelings among different age groups (Kumar & Jagacinski, 2006; Lester & Moderski, 1995; Oriel *et al.*, 2004; Want & Kleitman, 2006). Brauer and Proyer (2017) studied the IP in two groups (psychology students and working professionals). They discovered that age was significantly adversely connected with impostor sentiments in working

professionals but not undergraduates. Furthermore, one study examined the IP among adults. This study found that older adults experienced lower levels of impostor feelings than younger adults. This effect was partially explained by more excellent life experience and mastery of skills in older age groups (Bernard *et al.*, 2002).

There is no significant correlation between the highest qualification of respondents and the IP. All factors indicated no relationship: Alienation, Competence Doubt, Ambition, Working Style, Other-Self Divergence and Need for Sympathy. Although research indicates mixed findings regarding the relationship between the IP and the highest qualifications, evidence suggests that higher qualifications may increase the likelihood of experiencing the IP. The research found that students with higher academic achievement reported higher levels of the IP than those with lower academic achievement (Batchelder, 2020). Similarly, research by Vergauwe, Wille, Feys, De Fruyt, and Anseel (2015) found that individuals with higher education and occupational status reported higher IP levels. One possible explanation is that individuals with higher qualifications may have higher expectations of themselves, leading to feelings of inadequacy and self-doubt when they perceive that they are not meeting those expectations. However, it is essential to note that not all studies have found a significant relationship between higher qualifications and the Impostor Phenomenon. For example, Research by Clance and O'Toole (1987) found no significant differences in IP scores between graduate students and undergraduates. While evidence suggests that higher qualifications may increase the likelihood of experiencing the IP, the relationship between the two is complex and may depend on various factors, such as individual expectations, academic and occupational environments, and personal experiences.

Managerial/leadership experience and the IP were highly correlated at the 0.01 level. There was no correlation between experience and Ambition. Their correlation was significant at 0.05 between experience and the Need for Sympathy. There is a significant correlation significant at the 0.01 level for the factors. Working Style, Other-Self Divergence, Alienation and Competence Doubt. These numerical variables show a substantial relationship between managerial/leadership experience and respondents' pro- and pre-crastination inclinations, their perception of overstraining settings, and their sense of authenticity and propensity for impression management. The respondents' self-doubt, dread of failing, and unhealthy perfectionism were also linked with experience. This indicates a slight relationship between managerial/leadership experience and the constructs.

The literature suggests that although the research on the relationship between years of managerial experience and the IP is mixed, managerial experience can influence the experience

of the IP. Research has found that the relationship may depend on other factors, such as the individual's self-efficacy level or perceptions of competence. Some research suggests that individuals relatively new to their managerial roles may experience the IP more acutely. For example, one study found that new managers reported higher impostor feelings than those with more experience (Sakulku, 2011). Another study found that managers who had been in their roles for a shorter period reported significantly higher levels of IP than those with more experience (Ferrari & Thompson, 2006).

Managerial/leadership role indicated a significant correlation at the 0.05 level with the IP. There is no correlation between role and the factors Need for Sympathy, Working Style and Ambition. Furthermore, there was a significant correlation at 0.05 between Alienation and Competence Doubt factors. Moreover, there was a high correlation significance at the 0.01 level for the Other-Self Divergence factor. This numerical variable demonstrated a significant correlation between managerial/leadership expertise and perceptions of an overly demanding workplace. This indicated a slight relationship between managerial/leadership roles and these constructs. The literature suggests that the type of managerial role may influence the IP experience. Research has suggested that individuals in leadership roles may be more susceptible to experiencing impostor feelings than those in non-leadership roles. Research examining the IP in university leaders found that those in more senior positions, such as department chairs or deans, reported higher levels of impostor feelings than those in less senior positions (Parkman, 2016). One possible explanation for this trend is that individuals in leadership positions may feel a greater sense of responsibility and pressure to perform at a high level, which can contribute to feelings of self-doubt and insecurity. Additionally, the high level of visibility and scrutiny that often comes with leadership roles may also contribute to the IP experience. Overall, while more research is needed in this area, the available evidence suggests that the type of managerial role may play a role in the IP experience.

The IP had a more significant impact on the private sector sample ($M = 40.2$, $SD = 18.70$) than the public sector ($M = 35.13$, $SD = 18.69$). The t-p value indicated a score of .001, while Cohen's d-test indicated a score of .23. This results in a p-value of .001, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there is no equality in the sample. Cohen's $d = .23$, which these criteria define as small. These findings suggest that the private sector respondents reported a higher variation in the IP than the public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have

equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Research has suggested that the IP may be more common in specific industries or professions with high levels of competition, a focus on achievement, and a need to prove oneself constantly. This could potentially include sectors such as finance, law, medicine, and academia. However, it is essential to recognise that the IP can affect individuals in any sector, regardless of their role or level of experience. It can be particularly challenging for underrepresented or marginalised individuals in their field, as they may face additional barriers or feelings of isolation. Organisations can help to address the IP by promoting a culture of psychological safety, providing opportunities for mentorship and support, and encouraging open communication about feelings of self-doubt and the IP.

The Impostor Phenomenon construct, Competence Doubt, had a more significant impact on the private sector sample ($M = 36.70$, $SD = 22.91$) than the public sector sample ($M = 31.07$, $SD = 21.79$). The t-p value indicated a score of .002, while Cohen's d-test indicated a score of .25. This results in the p-value of .002, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample. These findings suggested that the private sector respondents reported a higher variation in the construct Competence Doubt than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations. Competence Doubt can impact private and public sectors, affecting individuals' confidence, performance, and career advancement in any workplace. However, the specific factors contributing to Competence Doubt may differ between the two sectors. Competence Doubt may be driven by competition, market pressures, and the constant need to innovate and adapt to changing business environments in the private sector. Employees may feel pressure to perform at high levels to advance in their careers or achieve financial success, leading to self-doubt and anxiety. Competence Doubt may be driven by bureaucracy, politics, and the need to navigate complex systems and regulations in the public sector. Employees may feel that their performance and advancement opportunities are limited by factors outside their control, which can lead to frustration and disillusionment. Overall, Competence Doubt is a common experience in many workplaces. Organisations must create supportive and inclusive environments to encourage employees to develop their skills and feel confident in their abilities. This can involve providing

training and mentorship opportunities, recognising and valuing employees' contributions, and fostering a culture of continuous learning and improvement.

The IP construct, Working Style, had a more significant impact on the private sector sample ($M = 38.19$, $SD = 29.32$) than the public sector sample ($M = 24.22$, $SD = 21.79$). The t-p value indicated a score of .000, while Cohen's d-test indicated a score of .38. This results in a p-value of .000, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample. These findings suggested that the private sector respondents reported a higher variation in the construct, Working Style than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Perfectionism and overworking can significantly impact both the private and public sectors, and the effects can depend on the specific context and job demands. In the private sector, perfectionism and overworking may be more prevalent in highly competitive industries, such as finance or technology, where there is pressure to achieve high levels of productivity and performance. This can lead to a culture of overwork and burnout, where employees constantly need to push themselves to meet or exceed expectations. In the public sector, perfectionism and overworking may be more prevalent in jobs involving high levels of responsibility, such as healthcare or emergency services, where there is pressure to provide high-quality services. Employees must constantly push themselves to meet or exceed expectations in providing the best possible care or services. This can lead to a culture of overwork and burnout. Overall, it is essential for organisations to recognise the potential negative impacts of perfectionism and overworking and to take steps to promote a healthy work-life balance and prevent burnout. This can involve strategies such as providing flexible work arrangements, promoting self-care and stress management, and encouraging a culture of collaboration and support.

The IP construct, Alienation, had a more significant impact on the private sector sample ($M = 39.05$, $SD = 21.49$) than the public sector sample ($M = 35.85$, $SD = 21.49$). The t-p value indicated a score of .066, while Cohen's d-test indicated a score of .15. This results in the p-value of .066, above the defined significance level of 5%. The Levene test was, therefore, not significant, and the null hypothesis was confirmed. Thus, there was equality in the sample. Cohen's $d = .15$, which these criteria define as small. These findings suggest that the private sector respondents reported

a higher variation in construct alienation than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Alienation can impact both the private and public sectors, and the nature and extent of this impact may vary depending on the specific context and circumstances. In the private sector, employees may feel alienated if they do not feel connected to the company's values or goals or feel that their contributions are not valued or recognised. This can lead to lower job satisfaction, productivity, and commitment levels, contributing to higher turnover and absenteeism rates. In the public sector, employees may feel alienated if they perceive a lack of support from management or feel that their work is not recognised or valued by the public or elected officials. This can lead to frustration, disengagement, and burnout, making attracting and retaining talented employees more challenging. In both sectors, addressing alienation and creating a more supportive and inclusive workplace culture can positively impact employee well-being and organisational performance. This can involve employee engagement programmes, diversity and inclusion training, and efforts to increase transparency and communication between employees and management.

The IP construct, Other-Self Divergence, had a more significant impact on the private sector sample ($M = 33.01$, $SD = 20.65$) than the public sector sample ($M = 33.01$, $SD = 21.3$). This results in a p-value of .066, above the defined significance level of 5%. The Levene test was, therefore, not significant, and the null hypothesis was confirmed. Thus, there was equality in the sample. These findings suggest that the private sector respondents reported a higher variation in the construct, Other-Self Divergence, than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Feeling disconnected from one's true self can impact the private and public sectors. It can affect an individual's mental and emotional well-being, impacting their job performance, relationships with colleagues and clients, and overall job satisfaction. In the private sector, feeling disconnected from one's true self may lead to disengagement, burnout and decreased productivity. This can

harm the individual's performance, as well as the performance of the organisation. In the public sector, feeling disconnected from one's true self can impact an individual's ability to serve the public and fulfil their duties effectively. This can negatively affect the community or society, as public sector employees are responsible for providing essential services and upholding public trust. Additionally, organisations can create supportive and inclusive environments that prioritise employee well-being and encourage employees to bring their whole selves to work. Individuals need to address feelings of disconnection from their true selves through therapy, self-reflection or other means.

The IP construct, Ambition, had a more significant impact on the private sector sample ($M = 55.03$, $SD = 21.00$) than the public sector sample ($M = 49.38$, $SD = 23.47$). The t-p value indicated a score of .044, while Cohen's d-test indicated a score of -.16. This results in the p-value of .044, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample. Cohen's $d = -.16$, which these criteria define as small. These findings suggest that the private sector respondents reported a higher variation in the Ambition construct than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Ambition can impact both the private and public sectors, as it is a personal characteristic that can influence an individual's career aspirations, goals and motivations. In the private sector, ambition can drive individuals to strive for career advancement, take on new challenges and pursue professional growth and development opportunities. It can motivate individuals to take risks, innovate and seek new business opportunities. In the public sector, ambition can drive individuals to seek leadership roles, pursue public service careers, and work towards achieving policy goals and outcomes. It can also motivate individuals to advocate for social justice, promote equality, and work towards creating positive social change. However, the private and public sectors may differ in how ambition is expressed and valued. For example, ambition may be more closely tied to financial success and individual achievement in the private sector. In contrast, ambition may be more closely tied to social impact and public service in the public sector. Overall, ambition can be a powerful motivator in both the private and public sectors and drive individuals to achieve their goals and positively impact their careers and communities.

The IP construct, Need for Sympathy, had a more significant impact on the private sector sample ($M = 53.00$, $SD = 21.50$) than the public sector sample ($M = 45.34$, $SD = 21.94$). The t-p value indicated a score of .000, while Cohen's d-test indicated a score of .35. This results in a p-value of .000, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample. These findings suggest that the private sector respondents reported a higher variation in the construct, Need for Sympathy, than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

The need for external validation can impact both the private sector and the public sector. Individuals with a strong need for external validation may be more likely to seek recognition and praise for their work, regardless of the type of organisation or sector in which they are employed. In the private sector, external validation can manifest in a desire for financial rewards or other forms of recognition, such as promotions or awards. This can drive individuals to work harder and strive for success, but it can also lead to a focus on short-term goals rather than long-term sustainability. In the public sector, external validation can manifest in a desire for recognition from superiors or the public, such as through positive media coverage or public approval ratings. This can drive individuals to work harder to achieve positive outcomes for their organisations or constituents. However, it can also lead to a focus on public opinion rather than the needs of the organisation or community. Overall, the need for external validation can have both positive and negative impacts in both the private and public sectors, and individuals need to find a balance between seeking recognition and staying focused on their goals and values.

Research suggests that the IP can affect individuals across various industries and professions, although some industries and professions may be more prone to impostor feelings than others. For example, research by Vergauwe *et al.* (2015) found that impostor feelings were more prevalent among individuals in the arts and humanities than those in the sciences. However, another study by Parkman (2016) found that impostor feelings were more common among medical students and residents than in other fields.

6.3.2 Differences in self-esteem between gender, age group, qualification level, years of experience, managerial/leadership role and sector

Self-esteem significantly impacted the female sample ($M = 19.18$, $SD = 5.58$) and male ($M = 19.18$, $SD = 5.87$) respondents equally. The t-p value indicated a score of .037, while Cohen's d-test indicated a score of -.17. This results in the p-value of .037, above the defined significance level of 5%. The Levene test was, therefore, not significant, and the null hypothesis was confirmed. Thus, there was equality in the sample. These findings suggest that female and male respondents reported an equal self-esteem score. Statistical findings indicated a significant probability that the relationship between self-esteem and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and self-esteem has limited practical applicability in real-life situations.

Studies on self-esteem have shown no significant differences between men's and women's overall levels of self-esteem. However, there are variations in how self-esteem manifests in men and women. For example, men tend to have higher self-esteem related to competition, achievement and dominance. In comparison, women tend to have higher self-esteem in social relationships and nurturing areas. Additionally, societal and cultural factors can influence self-esteem levels in men and women. Women often face more societal pressure to conform to traditional gender roles, affecting their self-esteem. Self-esteem can be influenced by gender, as societal and cultural factors can affect how individuals perceive themselves and their worth based on their gender. For example, women have historically been disadvantaged in many areas of life, such as education, employment and political representation. These societal factors can contribute to lower levels of self-esteem in women, as they may internalise messages about their worth and abilities based on their gender.

Additionally, societal expectations and stereotypes about gender can also affect self-esteem. For example, men may feel pressure to conform to traditional masculine roles, which can lead to a focus on competition, achievement and dominance and may contribute to higher levels of self-esteem in these areas. On the other hand, women may face pressure to conform to traditional feminine roles, which can lead to a focus on relationships and nurturing and may contribute to higher levels of self-esteem in these areas. Research suggests that gender can affect self-esteem, although the results are inconsistent across studies and may depend on various factors. Some studies have found that men have higher self-esteem than women (Robins *et al.*, 2002). However, other research has found that gender differences in self-esteem may vary depending

on age and culture (Bleidorn *et al.*, 2016). For example, one study found that girls tended to have lower self-esteem in adolescence than boys, but this gender difference tended to decrease or even reverse itself in adulthood (Orth *et al.*, 2008). Another study found that gender differences in self-esteem were more minor in more gender-egalitarian cultures (Bleidorn *et al.*, 2016). It is also important to note that differences between genders can be substantial. While gender can affect self-esteem, the relationship between gender and self-esteem is complex. It can depend on various factors, and differences between genders can be significant. Many factors beyond gender, such as personality, social support and life experiences, can influence self-esteem.

There was a significant correlation at the 0.01 level between self-esteem and age, highest qualification, managerial/leadership experience, and managerial/leadership role. This indicated that self-esteem has a significant influence on these factors. This also indicated that self-esteem has a small relationship with these factors. Research has suggested that age can influence an individual's self-esteem, with mixed results depending on the study and the specific aspect of self-esteem being examined. One study found that self-esteem was highest in middle adulthood and declined somewhat in later adulthood (Orth *et al.*, 2008). Other studies have found that self-esteem may remain relatively stable across the lifespan (Robins *et al.*, 2002). Overall, while there is some evidence to suggest that age can influence an individual's self-esteem, the results are mixed and may depend on the specific aspect of self-esteem being examined.

Research suggests that there may be a relationship between an individual's highest qualification and their self-esteem, although the nature of this relationship may be complex and context-dependent. Some studies have found that individuals with higher levels of education tend to have higher self-esteem than those with lower levels of education (Robins *et al.*, 2002). This relationship may be partly because higher levels of education may lead to more significant economic opportunities and social status, which in turn can enhance self-esteem. The relationship between education level and self-esteem may also depend on other factors, such as the individual's socio-economic status or the cultural context in which they live. For example, one study found that higher levels of education in collectivist cultures were associated with lower self-esteem, possibly due to the pressure to conform to group norms and expectations (Kitayama *et al.*, 1997).

Managerial experience can impact an individual's self-esteem. Some research suggests that managerial experience can increase self-esteem as individuals gain confidence and a sense of competence over time (Chemers *et al.*, 2000). However, the direction and strength of the relationship may depend on various factors such as the individual's personality, the type of work

environment, and the specific job responsibilities. For example, researchers have found that self-esteem can fluctuate depending on the level of success or failure experienced on the job and that high-stress levels or job demands may lead to lower self-esteem (Kirkpatrick & Ellis, 2004). It is essential to note that the relationship between managerial experience and self-esteem is complex and may be influenced by various individual and contextual factors.

A managerial role can positively and negatively influence self-esteem. Managers may experience increased self-esteem from the recognition and power of their position. The research found that individuals in higher-status occupations, such as managers, reported higher self-esteem than those in lower-status occupations (Judge *et al.*, 2005). Managers may also experience lower self-esteem due to the pressures and stress of the job. Additionally, managers may face criticism or negative feedback from subordinates or superiors, which can also lower self-esteem (Zhao & Seibert, 2006). Overall, the influence of managerial role on self-esteem can depend on various factors, such as the individual's perception of their role, the level of support and recognition they receive and the nature of their job demands.

Other research has found that impostor feelings are common among individuals in fields that are highly competitive or require a high level of achievement, such as academia, law and business (Clance & Imes, 1978; Neureiter & Traut-Mattausch, 2016; Villwock *et al.*, 2016). However, impostor feelings can also be present in individuals in less competitive or prestigious positions. While the IP can affect individuals across various industries and professions, specific industries or professions may be more prone to impostor feelings than others. However, impostor feelings are not limited to any specific industry or profession.

6.4.2 Differences in Self-Esteem, Age, Highest Qualification, Managerial/Leadership Experience, and Managerial/Leadership Role

The average self-esteem score is within the middle range of the possible scores and suggests that, on average, participants had moderate self-esteem. Cohen's $d = -.17$, which these criteria define as small. These findings suggest that female and male respondents reported an equal self-esteem score. Statistical findings indicated a significant probability that the relationship between self-esteem and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and self-esteem has limited practical applicability in real-life situations.

Studies on self-esteem have shown no significant differences between men's and women's overall levels of self-esteem. However, there are variations in how self-esteem manifests in men and women. For example, men tend to have higher self-esteem related to competition, achievement and dominance. In comparison, women tend to have higher self-esteem in social relationships and nurturing areas. Additionally, societal and cultural factors can influence self-esteem levels in men and women. Women often face more societal pressure to conform to traditional gender roles, affecting their self-esteem.

Self-esteem can be influenced by gender, as societal and cultural factors can affect how individuals perceive themselves and their worth based on their gender. For example, women have historically been disadvantaged in many areas of life, such as education, employment and political representation. These societal factors can contribute to lower levels of self-esteem in women, as they may internalise messages about their worth and abilities based on their gender.

Additionally, societal expectations and stereotypes about gender can also affect self-esteem. For example, men may feel pressure to conform to traditional masculine roles, which can lead to a focus on competition, achievement, and dominance and may contribute to higher levels of self-esteem in these areas. On the other hand, women may face pressure to conform to traditional feminine roles, which can lead to a focus on relationships and nurturing and may contribute to higher levels of self-esteem in these areas.

There was a significant correlation at the 0.01 level between self-esteem and age. Research has suggested that age can influence an individual's self-esteem, with mixed results depending on the study and the specific aspect of self-esteem being examined. One study found that self-esteem was highest in middle adulthood and declined somewhat in later adulthood (Orth *et al.*, 2008). Other studies have found that self-esteem may remain relatively stable across the lifespan (Robins *et al.*, 2002). Overall, while there is some evidence to suggest that age can influence an individual's self-esteem, the results are mixed and may depend on the specific aspect of self-esteem being examined.

There was a significant correlation at the 0.01 level between self-esteem and the highest qualification. Research suggests that there may be a relationship between an individual's highest qualification and their self-esteem, although the nature of this relationship may be complex and context-dependent. Some studies have found that individuals with higher levels of education tend to have higher self-esteem than those with lower levels of education (Robins *et al.*, 2002). This

relationship may be partly because higher levels of education may lead to more significant economic opportunities and social status, which in turn can enhance self-esteem.

Overall, while some evidence suggests that an individual's highest qualification may influence their self-esteem, the relationship may be complex and influenced by various factors. The relationship between education level and self-esteem may also depend on other factors, such as the individual's social status or the cultural context in which they live. For example, one study found that higher levels of education in collectivist cultures were associated with lower self-esteem, possibly due to the pressure to conform to group norms and expectations (Kitayama *et al.*, 1997).

There was a significant correlation at the 0.01 level between self-esteem and managerial/leadership experience. Managerial experience can impact an individual's self-esteem. Some research suggests that managerial experience can increase self-esteem as individuals gain confidence and a sense of competence over time (Chemers *et al.*, 2000). However, the direction and strength of the relationship may depend on various factors such as the individual's personality, the type of work environment, and the specific job responsibilities. For example, researchers have found that self-esteem can fluctuate depending on the level of success or failure experienced on the job and that high-stress levels or job demands may lead to lower self-esteem (Kirkpatrick & Ellis, 2004). It is essential to note that the relationship between managerial experience and self-esteem is complex and may be influenced by various individual and contextual factors.

There was a significant correlation at the 0.01 level between self-esteem and managerial/leadership role. Managerial roles can positively and negatively influence self-esteem. Managers may experience increased self-esteem from the recognition and power of their position. Research has found that individuals in higher-status occupations, such as managers, reported higher self-esteem than those in lower-status occupations (Judge *et al.*, 2005). Managers may also experience lower self-esteem due to the pressures and stress of the job. Additionally, managers may face criticism or negative feedback from subordinates or superiors, which can also lower self-esteem (Zhao & Seibert, 2006). Overall, the influence of managerial role on self-esteem can depend on various factors, such as the individual's perception of their role, the level of support and recognition they receive and the nature of their job demands.

The average self-esteem score ranges were within the middle range of the possible scores and suggested that, on average, participants had moderate self-esteem. These findings suggest that

the private sector respondents reported an almost equal variance in self-esteem to public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Some evidence suggests that self-esteem may affect job performance and satisfaction in different industries, but the results are mixed and may depend on various factors. One study found that self-esteem was positively related to job performance and job satisfaction in the service industry, which includes jobs such as food service and customer service (Choi *et al.*, 2015). Another study found that self-esteem was positively related to job satisfaction and organisational commitment (LeRouge *et al.*, 2006)

However, evidence suggests that the relationship between self-esteem and job performance or satisfaction may vary depending on the specific industry and the level of job complexity. For example, research found that self-esteem was positively related to job satisfaction among government-run sales representatives. However, the relationship was insignificant for those in other departments (Alavi & Askaripur, 2003). Another study found that self-esteem was positively related to job satisfaction only among employees in low-complexity jobs but not among those in high-complexity jobs (Judge *et al.*, 2000). Overall, while some evidence suggests that self-esteem may affect job performance and satisfaction in different industries, the results are mixed and may depend on factors such as the specific industry and level of job complexity.

Research suggests that self-esteem can vary across different sectors and industries. While there is no definitive answer as to which sectors or industries have higher or lower self-esteem levels, some studies have examined the relationship between self-esteem and job satisfaction in specific industries. For example, one study found that self-esteem was positively related to job satisfaction among employees in healthcare (Liu *et al.*, 2017). Another study found that self-esteem was positively related to job satisfaction among employees in the academic sector (Johnson *et al.*, 2019).

Other research has found that individuals working in specific sectors or industries may have lower self-esteem than others. For example, research examining self-esteem levels among teachers found that they had lower self-esteem levels than other professions (Fu *et al.*, 2021). Similarly, research examining self-esteem levels among law enforcement officers found lower self-esteem

levels than other professions (Pikoulas *et al.*, 2022). Overall, while there is no clear consensus on the relationship between self-esteem and different sectors or industries, some research suggests that specific sectors may be associated with higher or lower levels of self-esteem.

6.4.3 Differences in MDMSE between Behaviour Between Gender, Age Groups, Qualification Level, Years of Experience, Managerial Levels and Sector

The MDSE scores range from a minimum of 25 to a maximum of 100. The mean score for the MDMSE indicates that, on average, participants had relatively high MDMSE skills. The MDSE construct had a higher variation in the male sample ($M = 80.20$, $SD = 9.56$) than in the female ($M = 77.92$, $SD = 10.71$). The t -p value indicated a score of .006, while Cohen's d test indicated a score of .23. Cohen's $d = .23$, which these criteria define as small. This results in a p -value of .006, below the defined significance level of 5%. Thus, there was no equality in the sample. The Levene test was, therefore, significant, and the null hypothesis was not confirmed.

These findings suggest that male respondents reported a more significant influence by the construct decision-making self-efficacy construct than male respondents. Statistical findings indicated a significant probability that the relationship between MDMSE and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

Research suggests no significant difference in MDMSE between men and women. Studies have found that both men and women report similar levels of self-efficacy in managerial decision-making tasks (Stajkovic & Luthans, 1998, 2003). Some research has even suggested that women may have higher levels of self-efficacy in certain aspects of managerial decision-making, such as communication and teamwork (Stajkovic & Luthans, 1998, 2003). However, it is essential to note that women continue to be underrepresented in top management positions in many industries and may face unique challenges and biases that can impact their opportunities for advancement and success in leadership roles. While there may not be inherent differences in decision-making self-efficacy between men and women, gender bias and stereotypes can still affect how others perceive and evaluate their performance in managerial roles.

The higher mean in Analytical and Inferential Efficacy scores indicated that participants may struggle with logical reasoning and problem-solving. Table 5.36 shows Cohen's $d = .16$, which these criteria define as small. The MDMSE construct, Analytical and Inferential Efficacy had a more significant impact on the male sample ($M = 78.79$, $SD = 11.51$) than female ($M = 76.91$, SD

= 12.71). The t-p value indicated a score of .058, while Cohen's d-test indicated a score of .16. This resulted in the p-value of .058, above the defined significance level of 5%. The Levene test was, therefore, not significant, and the null hypothesis was confirmed. Thus, there was equality in the sample.

These findings suggest that male respondents reported a higher variation in the Analytical and Inferential Efficacy construct than female respondents. Statistical findings indicated a significant probability that the relationship between the IP and gender variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

There is a commonly held belief that men perform better with logical reasoning and problem-solving than women. However, research suggests no significant difference in cognitive abilities between men and women in these areas. For example, the research found no gender differences in general cognitive ability or specific cognitive domains such as verbal, spatial, or mathematical ability. It is important to note that while there may be some average differences between men and women in specific cognitive abilities, these differences are slight, and the overlap between the distributions of men and women is significant. In other words, there is much more variability within each gender than between genders. Furthermore, individual differences in cognitive abilities are influenced by various factors, such as education, experience, motivation, and cultural background, and cannot be attributed solely to gender. Therefore, it is inaccurate to make broad generalisations about men's and women's cognitive abilities, as everyone is unique and has strengths and weaknesses.

The relatively high mean scores for Exploratory Search and Processing Efficacy suggest that participants engage in creative thinking. Table 5.36 displays Cohen's $d = .24$, which these criteria define as small. The MDMSE construct, Exploratory Search and Processing Efficacy had a more significant impact on the male sample ($M = 83.44$, $SD = 10.32$) than the female ($M = 81.69$, $SD = 11.42$). The t-p value indicated a score of .003, while Cohen's d-test indicated a score of .24. This results in the p-value of .003, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample.

These findings suggest that male respondents reported a higher variation by the constancy Exploratory Search and Processing Efficacy construct than female respondents. Statistical

findings indicated a significant probability that the relationship between the construct, exploratory search and processing and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

No definitive evidence suggests that men perform better in creative thinking than women. While some studies have found gender differences in certain aspects of creativity, such as divergent thinking (the ability to generate multiple ideas), these differences are generally small and inconsistent. Research suggests that creativity is a complex and multifaceted construct that cannot be reduced to superficial gender differences. Education, training, experience, and motivation can all play essential roles in developing creative abilities, regardless of gender. It is also important to note that cultural and societal factors may influence gender differences in creative thinking. Stereotypes and gender roles can shape our beliefs about what is considered creative or acceptable for men and women, which may influence the opportunities and resources available to each gender for developing creative abilities. Overall, it is inaccurate or unhelpful to generalise gender and creativity. Both men and women are capable of creative thinking and can benefit from opportunities to develop and express their creativity.

The mean score for Social Influence Efficacy suggests that participants could persuade and influence others. Cohen's $d = .19$, which these criteria define as small. The MDMSE construct, Social Influence Efficacy, had a more significant impact on the male sample ($M = 74.54$, $SD = 12.04$) than female ($M = 74.14$, $SD = 13.53$). The t - p value indicated a score of .023, while Cohen's d -test indicated a score of .19. This results in the p -value of .023, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample.

These findings suggest that male respondents reported a higher variation by this construct, Social Influence Efficacy, than female respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was homogeneous between the two groups. Therefore, the populations had equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

No evidence suggests that men persuade and influence others better than women. Both men and women can be effective communicators and persuasive influencers, and persuasion's

effectiveness largely depends on the individual's communication skills, approach, and the context of the situation. Research has shown that women are often more skilled at interpersonal communication, emotional intelligence, and building rapport with others, which can be essential factors in persuasion and influence. Women may also be more likely to use collaborative and inclusive approaches, which can be effective in building consensus and achieving buy-in from others (Dindia & Allen, 1992). Gender bias and stereotypes can sometimes lead individuals to perceive men as more persuasive and influential than women, even when their communication skills and approaches are similar. Recognising and addressing these biases is essential to ensure everyone's voices and perspectives are heard and valued equally in the workplace and other settings.

The relatively high mean scores for Thought and affect control suggest that participants could manage their emotions. Cohen's $d = .24$, which these criteria define as small. The MDMSE construct, Social Influence Efficacy, had a more significant impact on the male sample ($M = 80.34$, $SD = 10.64$) than the female ($M = 77.64$, $SD = 11.68$). The t - p value indicated a score of .003, while Cohen's d -test indicated a score of .24. This results in the p -value of .003, below the defined significance level of 5%. The Levene test was, therefore, significant, and the null hypothesis was not confirmed. Thus, there was no equality in the sample.

These findings suggest that male respondents reported a higher variation in the construct Thought and Affected Control construct than female respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

No evidence suggests that men manage their emotions better than women. While there are some gender differences in how emotions are expressed and experienced, research has consistently shown that men and women are equally capable of managing their emotions effectively. Some studies have suggested that women may be more emotionally expressive and have greater emotional awareness than men. However, gender norms and expectations may influence how emotions are expressed and perceived, and women may face more significant social consequences for expressing certain emotions, such as anger or assertiveness. It is essential to recognise that emotional management involves various factors, including personality traits, upbringing, cultural background, and socialisation. It is inaccurate or unhelpful to broadly generalise how different genders manage their emotions. Instead, it is essential to focus on

developing emotional intelligence and practical emotional management skills for everyone, regardless of gender.

Research has shown that there may be gender differences in MDSE. One study found that female managers have lower decision-making self-efficacy than male managers (Hackett & Betz, 1981). Another study found that female managers tend to have lower levels of self-efficacy in general, which includes decision-making self-efficacy, compared to male managers (Michele Kacmar *et al.*, 2006).

While there may be some gender differences regarding MDMSE, the relationship is not always straightforward. Other factors, such as perceived gender bias, may influence it. However, other research has shown that the relationship between gender and decision-making self-efficacy may be more complex than comparing males and females. One study found that while there was no significant difference between men and women in MDMSE, women who perceived more gender bias in their workplace had lower levels of MDMSE (Beckwith *et al.*, 2007).

Research suggests that gender can affect MDMSE. In general, women tend to report lower levels of self-efficacy than men in various domains, including leadership and decision-making. One study found that female managers reported lower decision-making self-efficacy than male managers, partly explained by women's tendency to perceive more significant barriers to success in leadership roles (Molino *et al.*, 2018).

While evidence suggests that gender can affect MDMSE, the results are mixed and may depend on various factors, including the specific context and population being studied. However, other studies have found no significant gender differences in decision-making self-efficacy among managers (e.g., Huang *et al.*, 2006). Moreover, some research has suggested that the gender gap in self-efficacy may be closing over time as women increasingly occupy leadership roles and gain more experience and confidence in decision-making (Huang, 2013).

There is a significant correlation between age and MDMSE. Furthermore, the correlation was significant at the 0.01 level for the following factors: Analytical and Inferential Efficacy, Exploratory Search and Processing Efficacy, Social Influence Efficacy, MDMSEQ scale and Thought and Affected Control. This indicates a small to medium relationship between age and the constructs. The literature suggests that age may influence MDMSE, with mixed results. Previous research found that older managers reported higher levels of MDMSE than younger managers (Seltzer & Bass, 1990). Another study found that as managers aged, they tended to develop a more nuanced

understanding of their abilities and limitations, which could lead to increased decision-making self-efficacy (Nelson & Quick, 2013). Other research has found that age may not be a significant factor in determining MDMSE among managers. For example, research examining MDMSE among middle-aged managers found no significant relationship between age and self-efficacy (Mumford & Licuanan, 2004). Overall, the relationship between age and MDMSE among managers is unclear and may depend on various factors, including individual differences, context, and the specific aspects of decision-making being examined.

MDMSE influences how individuals manage their emotions. Research has shown that emotional regulation strategies and abilities improve with age. This is because individuals have more life experiences as they age and develop better coping skills to deal with difficult emotions. One study found that older adults were more likely to use problem-focused coping strategies, which involve actively addressing the source of stress, compared to emotion-focused coping strategies, which involve regulating emotions. The study also found that older adults were less likely to use avoidant coping strategies, which involve avoiding or denying the source of stress, than younger adults (Charles & Carstensen, 2008).

Older adults are better able to regulate their emotions compared to younger adults. It was found that older adults were more likely to use cognitive reappraisal than suppression (Folkman & Lazarus, 1980). Older adults better at regulating their emotions had better mental health outcomes and a higher quality of life. This suggests that emotional regulation skills can benefit older adults in terms of their overall wellbeing. It is important to note that while age can be a factor in emotional regulation, it is not the only factor; other factors, such as personality, culture, and life experiences, can also influence how individuals manage their emotions (Labouvie-Vief & Medler, 2002; Mroczek & Kolarz, 1998).

MDMSE influences how individuals engage in creative thinking. While there is no clear consensus on how age affects creativity, some studies suggest that older adults may be less likely to engage in creative thinking than younger adults, possibly due to cognitive declines associated with ageing. In contrast, others suggest that older adults may be better at generating creative ideas than younger adults, possibly due to their more life experience and knowledge (Kleibeuker *et al.*, 2013; Sternberg, 2003).

MDMSE influences how individuals engage in logical reasoning and problem-solving. While there is no clear consensus on exactly how age affects logical reasoning and problem-solving, some studies suggest that older adults may experience declines in their ability to engage in logical

reasoning and problem-solving. For example, older adults performed worse than younger adults on a task involving logical reasoning and problem-solving, possibly due to declining working memory. In contrast, others suggest that older adults may use different strategies to compensate for these declines and processing speeds associated with ageing. Older adults were better than younger adults at using prior knowledge to solve problems, possibly due to their more excellent life experience and expertise (Kaufmann *et al.*, 2005; Reed & Carstensen, 2012; Ward & Wegner, 2013).

MDMSE influences how individuals persuade and influence others. While there is no clear consensus on exactly how age affects persuasion and influence, some studies suggest that older adults may be less effective at using persuasion techniques. For example, older adults were less likely to use assertive and dominant persuasive communication strategies than younger adults. In contrast, others suggest that older adults may use specific influence strategies better. Older adults were better than younger adults at using emotional appeals to influence others (Hart *et al.*, 2009).

A significant correlation exists between the highest qualification and MDMSE. A significant correlation at the 0.01 level was seen for the Social Influence Efficacy, MDMSEQ scale, Exploratory Search and Processing Efficacy, and Analytical and Inferential Efficacy factors. There was also a significant correlation at the 0.05 level for the factor Thought and Affected Control. This indicates a small to medium relationship between the highest qualification and the constructs.

The literature suggests that an individual's highest qualification may influence MDMSE. Higher education and training can give individuals the knowledge and skills necessary to make informed decisions, leading to greater confidence in their decision-making abilities. However, it is essential to note that education is not the only factor influencing MDMSE (Chong & Ma, 2010). Experience, training, and job responsibilities can also shape an individual's confidence in their decision-making abilities. Overall, while an individual's highest qualification can play a role in influencing their level of MDMSE, it is just one of many factors that can influence this construct.

MDMSE influences how individuals manage emotions. Individuals with higher levels of education tend to use more adaptive emotional regulation strategies and have better emotional regulation outcomes than those with lower levels of education. They are also more likely to use cognitive reappraisal as an emotional regulation strategy than those with lower levels of education. Research suggested that this may be because individuals with higher levels of education have more cognitive resources and may be more skilled at using cognitive strategies to manage their

emotions. Higher levels of education are associated with lower emotional reactivity in response to stressful events. Research suggests that this may be because individuals with higher levels of education have more coping resources and may be better able to manage their emotions in response to stress. Individuals with higher levels of education often have greater levels of emotional well-being, defined as a balance of positive and negative emotions, compared to those with lower levels of education (Gross & John, 2003; Schmeichel & Demaree, 2010; Wood & Joseph, 2010).

MDMSE influences how individuals engage in creative thinking. Individuals who obtained higher qualifications tend to engage in creativity differently than those with lower levels of education. Specifically, higher levels of education have been linked to greater creativity and the use of more complex and sophisticated creative-thinking strategies. The researchers suggested that this may be because individuals with higher levels of education have more exposure to diverse knowledge domains and have developed more complex cognitive structures that support creative thinking (Kim, 2011; Runco & Acar, 2012; Sternberg & Lubart, 1999).

MDMSE influences how individuals engage in logical reasoning and problem-solving. Individuals who obtained higher qualifications tend to engage in logical reasoning and problem-solving differently than those with lower levels of education. Specifically, higher levels of education have been linked to more excellent proficiency in logical reasoning and problem-solving skills, including deductive and analytical reasoning. Research suggests that this may be because individuals with higher levels of education have had more exposure to formal reasoning systems and have developed more complex cognitive structures that support logical reasoning. (Ackerman & Rolfhus, 1999; Chi *et al.*, 1981; Halford *et al.*, 1998).

MDMSE influences how individuals persuade and influence others. Individuals who have obtained higher qualifications tend to have greater persuasion and influence skills than those with lower levels of education. Specifically, higher levels of education have been linked to better communication and critical thinking skills, which can enhance an individual's ability to persuade and influence others. Individuals with higher levels of education were more effective at persuading others in both face-to-face and written communication contexts. Research suggests that this may be because individuals with higher levels of education are better able to articulate their arguments and use more complex language and reasoning to support their points. Individuals with higher levels of education tended to be more skilled at negotiating and influencing others. This may be because individuals with higher levels of education have had more exposure to complex social situations and have developed better communication and critical thinking skills. Higher levels of

education were positively related to individuals' ability to persuade and influence others. This may be because higher levels of education are associated with more excellent knowledge and expertise, which can enhance an individual's credibility and persuasive power (Cialdini, 2007; Graesser & Nakamura, 1982; Kunda, 1990).

There was a significant correlation between managerial/ leadership experience and MDSE. There was furthermore a high correlation at the 0.01 level for factors, Analytical and Inferential Efficacy, Exploratory Search and Processing Efficacy, Social Influence Efficacy, and Thought and Affected Control.

Years of managerial experience can influence MDMSE; however, it is essential to note that not all studies have found a significant relationship between years of experience and MDMSE. As managers gain more experience, they tend to develop higher levels of self-efficacy related to decision-making. Research has found that as managers gain more experience in their roles, they develop greater confidence in their decision-making ability (Lussier & Achua, 2015).

MDMSE influences how individuals manage their emotions. Research has found that leaders who can better regulate their emotions are more effective in their roles and more successful in achieving their goals. Leaders who could better regulate their emotions were more successful in negotiations by controlling the negotiation process and achieving more favourable outcomes. Leaders who can better manage their emotions are more effective at managing their teams. Their subordinates perceived leaders who could better regulate their emotions as more effective. They also create a more positive work environment, leading to higher job satisfaction and lower turnover among team members. Leaders better at managing their emotions were likelier to engage in transformational leadership behaviours, which may inspire and motivate their followers to achieve their goals. This type of leadership has been linked to higher levels of employee engagement and job satisfaction (Diefendorff *et al.*, 2008; Grandey *et al.*, 2002; Sy, Côté, & Saavedra, 2005).

Managerial Decision-Making Self-Efficacy influences how individuals engage in creative thinking. Research suggests that individuals with more leadership experience tend to engage in creative thinking differently than those with less leadership experience. Leadership experience can enhance an individual's ability to think creatively by developing skills such as strategic thinking, risk-taking, and the ability to generate and evaluate ideas individuals with leadership experience are more likely to engage in creative thinking and generate more novel ideas than those without leadership experience. Research suggests that this may be because leadership experience

allows individuals to develop problem-solving, innovation, and decision-making skills, which can enhance their creative thinking abilities. Leaders with experience managing complex situations and leading diverse teams were likelier to engage in creative thinking and be open to new ideas. Research suggested that this may be because leadership experience can broaden an individual's perspective and increase their tolerance for ambiguity and uncertainty, which are essential in creative thinking. Leadership experience is positively related to creativity and innovation in organisations. The researchers suggested that this may be because leaders with more experience have a better understanding of their organisation's needs and goals and are better equipped to identify opportunities for innovation and develop creative solutions (Mumford *et al.*, 2002; Shin & Zhou, 2003; Tierney & Farmer, 2002; Zhang & Bartol, 2010)

Managerial Decision-Making Self-Efficacy influences how individuals engage in logical reasoning and problem-solving. Individuals with more leadership experience have been found to possess a more strategic and systems-level approach to problem-solving and decision-making and more assertive critical thinking and analytical skills. These leaders rely on a more strategic approach to decision-making, considering multiple perspectives and potential outcomes before concluding. Research suggests that this may be because experienced leaders have had more exposure to complex decision-making situations and thus have developed more sophisticated problem-solving skills. Leaders with more experience tend to use a more systematic and analytical approach to problem-solving because they have more exposure to diverse problem-solving situations and thus have developed a more remarkable ability to analyse and synthesise information. Leaders with more experience tended to be more effective at solving complex problems. They can recognise patterns and connections between seemingly disparate pieces of information, allowing them to arrive at more creative and effective solutions (Husted & Allen, 2008; Mumford *et al.*, 2000; O'Leary & Mortensen, 2010; Yammarino & Dansereau, 2009).

Managerial Decision-Making Self-Efficacy influences how individuals persuade and influence others. Leadership experience positively affects an individual's ability to persuade and influence others because leadership experience provides individuals with a greater understanding of how to manage interpersonal relationships, build trust, and communicate effectively with others. Leadership experience can give individuals a greater understanding of group dynamics, decision-making processes, and communication strategies, enhancing their ability to persuade and influence others. Individuals with leadership experience were more effective at influencing others in various contexts, including organisational decision-making and interpersonal relationships. Research suggests this may be because individuals with leadership experience better understand

the social and psychological factors influencing behaviour and decision-making (Abrams & Hogg, 2006; Antonakis & House, 2014; Chen & Tjosvold, 2007; Tannenbaum *et al.*, 1991).

There is a significant correlation between managerial/ leadership roles and MDSE. There is furthermore a high correlation at 0.01 level for factors, Exploratory Search and Processing Efficacy, Analytical and Inferential Efficacy, Social Influence Efficacy and Thought and Affected Control.

The literature suggests that the managerial role can influence MDSE. The relationship between managerial role and decision-making self-efficacy is complex; it may depend on various factors, including the specific industry or organisational context and the individual manager's experience and training. Several studies have found that higher-level managers, such as executives or senior managers, tend to have higher decision-making self-efficacy than lower-level managers; this may be because higher-level managers have more experience and training in making complex decisions and have had more opportunities to develop and refine their decision-making skills (Barling *et al.*, 2000; Chan & Drasgow, 2001).

Managerial Decision-Making Self-Efficacy influences how individuals manage emotions. Research has shown that leaders in higher levels of management tend to have better emotional regulation and expression skills than those in lower levels of management. They are better at regulating their emotions and have better emotional expressivity than those in lower levels of management. Research suggests that this may be because leaders at higher levels of management have more experience dealing with complex and challenging situations, which has allowed them to develop greater emotional regulation and expression skills. Leaders in higher levels of management tended to have higher emotional intelligence than those in lower levels of management. Emotional intelligence includes the ability to perceive, understand, and manage one's own emotions, as well as the emotions of others. Research suggests that this may be because leaders at higher levels of management are better able to recognise and manage their own emotions. Higher emotional intelligence allows them to manage and lead their teams better. Leaders in higher levels of management were better able to cope with workplace stress than those in lower levels of management because leaders at higher levels of management have more control over their work environments (Brown *et al.*, 2005; George & Brief, 1996; Huy, 1999; Parke *et al.*, 2015)

Managerial Decision-Making Self-Efficacy influences how individuals engage in creative thinking. Leaders from different levels of management may engage in creative thinking differently, with top

management generally being more strategic and visionary, middle management being more innovative and operational, and supervisory management being more focused on problem-solving and decision-making within their immediate work areas. Research suggested that this may be because different levels of management are responsible for different aspects of the organisation's operations and have different perspectives and priorities. Leaders' creativity is influenced by their level of management, as well as their personality traits and cognitive abilities. The research found that top management leaders were likelier to exhibit transformational leadership behaviours and engage in strategic thinking. At the same time, middle and lower-level managers were more likely to exhibit transactional leadership behaviours and engage in operational thinking. Research published found that leaders from different levels of management had different attitudes towards creativity and innovation, with top management being more supportive of strategic innovation, middle management being more supportive of operational innovation, and supervisory management being more supportive of incremental innovation (Mumford *et al.*, 2002; Scott & Bruce, 1994; Zhang & Bartol, 2010)

Managerial Decision-Making Self-Efficacy influences how individuals engage in logical reasoning and problem-solving. Research has shown that leaders at different levels of the organisation have different roles and responsibilities, which can influence how they engage in these cognitive processes. Supervisory leaders, responsible for day-to-day operations and managing frontline employees, often focus on operational problem-solving, which involves identifying and resolving issues related to the production process, quality control, and customer service. They rely on their experience and knowledge of the production process to identify and solve problems quickly. Middle management leaders, who are responsible for coordinating and managing the activities of multiple departments or teams, often engage in strategic problem-solving, which involves identifying and addressing broader organisational issues, such as resource allocation, budgeting, and goal-setting. They use data and analytics to inform decisions and develop long-term solutions to complex problems. Top management leaders, who are responsible for setting the overall strategy and vision of the organisation, engage in visionary problem-solving, which involves identifying and addressing high-level issues related to the organisation's mission, values, and long-term goals. They rely on their experience and intuition to make decisions and often use strategic thinking to guide the organisation's direction (Dooley & Fryxell, 1999)

Managerial Decision-Making Self-Efficacy influences how individuals persuade and influence others. Leaders at different levels of management have different responsibilities, goals, and contexts, which can affect their persuasive strategies and tactics. Supervisory leaders are responsible for managing small teams of employees and ensuring that day-to-day operations run

smoothly. They may rely on their personal relationships and direct supervision to influence their employees. Research has shown that supervisory leaders use more directive communication styles to provide specific instructions and closely monitor their employees' performance (Bono & Judge, 2003). They may also use a more personal, supportive approach to build trust and motivate their employees (Avolio *et al.*, 2004).

Middle managers use a more transformational leadership style, inspiring and motivating their employees to achieve their full potential (Bass & Riggio, 2006). These leaders oversee larger teams of employees and ensure their teams meet their goals and objectives. They may use a more participative leadership style, involving their employees in decision-making and encouraging their input (House & Aditya, 1997). Top management leaders are responsible for setting the organisation's strategic direction and ensuring it meets its long-term goals. Research has shown that top managers use a more charismatic leadership style, using their personal qualities and vision to inspire and motivate others (Conger & Kanungo, 1998). They may use a more strategic, visionary approach to influence their stakeholders, including investors, customers, and employees (Bower, 2007).

The MDSE scores range from a minimum of 25 to a maximum of 100. The mean score for the MDMS indicates that, on average, participants had relatively high MDMSE skills. Cohen's $d = .10$, which these criteria define as small. The MDSE scale had a more significant impact on the private sector sample ($M = 79.67$, $SD = 9.78$) than the public sector ($M = 78.63$, $SD = 10.54$). The t - p value indicated a score of .206, while Cohen's d -test indicated a score of .10. This results in the p -value of .206, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

These findings suggest that the private sector respondents reported a higher variation in MDSE than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Managerial Decision-Making Self-Efficacy can impact both the private sector and the public sector. In the private sector, MDSE can impact an organisation's success by influencing the quality of decisions made by managers and leaders. A strong belief in one's decision-making abilities can lead to more confident and effective decision-making, translating to improved

organisational performance and competitiveness. In the public sector, MDSE can also impact decision-making quality and outcomes. Public sector managers and leaders face unique challenges and constraints, such as navigating political and social pressures, working within limited budgets, and addressing complex public policy issues. A strong belief in one's decision-making abilities can help mitigate these challenges and improve the quality and effectiveness of decision-making in the public sector. Overall, MDSE can be essential in driving success and positive outcomes in both the private and public sectors.

The higher mean in Analytical and Inferential Efficacy scores indicates that participants may struggle with logical reasoning and problem-solving. The MDSE construct, Analytical and Inferential Efficacy had a more significant impact on the private sector sample ($M = 78.71$, $SD = 12.29$) than the public sector sample ($M = 77.09$, $SD = 11.86$). The t-p value indicated a score of .097, while Cohen's d-test indicated a score of .13. This results in a p-value of .097, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .13$, which these criteria define as small.

These findings suggest that the private sector respondents reported a higher variation in the Analytical and Inferential Efficacy construct than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Logical reasoning and problem-solving skills are essential in the private and public sectors. These skills are critical for making informed decisions, identifying and solving problems, and achieving organisational goals. In the private sector, logical reasoning and problem-solving skills are essential for businesses to stay competitive and profitable. Companies must identify and solve problems quickly and efficiently, adapt to changing market conditions, and make strategic decisions based on sound logic and reasoning. In the public sector, logical reasoning and problem-solving skills are essential for government agencies to provide effective and efficient services to citizens. Government agencies must be able to analyse complex issues, develop and implement policies and programmes, and make decisions based on a rigorous evaluation of evidence and data. Overall, logical reasoning and problem-solving skills are critical for success in both the private and public sectors. Organisations prioritising these skills are more likely to achieve their goals and succeed in a rapidly changing and complex environment.

The relatively high mean scores for Exploratory Search and Processing Efficacy suggest that participants engage in creative thinking. Cohen's $d = .14$, which these criteria define as small. The MDSE construct, Exploratory Search and Processing Efficacy, had a more significant impact on the private sector sample ($M = 83.38$, $SD = 10.35$) than the public sector sample ($M = 81.83$, $SD = 11.37$). The t - p value indicated a score of .079, while Cohen's d -test indicated a score of .14. This results in a p -value of .079, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

These findings suggest that the private sector respondents reported a higher variation in the construct, exploratory search, and processing efficacy than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Logical reasoning and problem-solving skills are essential in the private and public sectors. These skills are critical for making informed decisions, identifying and solving problems, and achieving organisational goals. In the private sector, logical reasoning and problem-solving skills are essential for businesses to stay competitive and profitable. Companies must identify and solve problems quickly and efficiently, adapt to changing market conditions, and make strategic decisions based on sound logic and reasoning. In the public sector, logical reasoning and problem-solving skills are essential for government agencies to provide effective and efficient services to citizens. Government agencies must be able to analyse complex issues, develop and implement policies and programmes, and make decisions based on a rigorous evaluation of evidence and data.

The mean score for Social Influence Efficacy suggests that participants could persuade and influence others. Cohen's $d = .13$, which these criteria define as small. The MDSE construct, Social Influence Efficacy, had a more significant impact on the private sector sample ($M = 76.25$, $SD = 12.04$) than the public sector sample ($M = 74.64$, $SD = 13.48$). The t - p value indicated a score of .120 while Cohen's d -test indicated a score of .13. This results in the p -value of .120, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

These findings suggest that the private sector respondents reported a higher variation by the construct, Social Influence Efficacy than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Persuading and influencing others can impact both the private and public sectors. Effective communication and persuasive skills are essential in various professional settings, including business, government, and non-profit organisations. In the private sector, persuasive and influential skills can be essential for sales, marketing, and customer service roles. Communicating effectively and building rapport with customers and clients can lead to tremendous success. In leadership roles, persuasion and influence can be necessary to build support for new initiatives or changes and gain stakeholders' buy-in. In the public sector, persuasive and influential skills can be essential for politicians, policymakers, and public officials, who must build support for policies and initiatives and build relationships with constituents and other stakeholders. Effective communication and persuasive skills can also be necessary for public relations and communication roles, where managing public perception and building trust with stakeholders is critical. Overall, the ability to persuade and influence others can be important in a variety of professional settings and can have a significant impact on an individual's success in their career.

The relatively high mean scores for Thought and affect control suggest that participants could manage their emotions. Cohen's $d = .02$, which these criteria define as small. The MDSE construct, Thought and Affected Control, had a more significant impact on the private sector sample ($M = 79.23$, $SD = 11.13$) than the public sector sample ($M = 79.01$, $SD = 11.30$). The t - p value indicated a score of .804, while Cohen's d -test indicated a score of .02. This results in a p -value of .804, above the defined significance level of 5%. Thus, there is equality in the sample. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

These findings suggest that the private sector respondents reported a higher variation by the construct, Thought and Affected Control than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Managing emotions can impact both the private and public sectors, as emotional intelligence and effective emotional management are essential skills for success in any workplace. In the private sector, managing emotions is essential for building positive relationships with customers, colleagues, and other stakeholders. Emotionally intelligent leaders and managers are better able to inspire and motivate their teams, resolve conflicts, and adapt to changing business environments. They are also better equipped to handle high-pressure situations and make sound decisions under stress. In the public sector, managing emotions is vital for building trust and credibility with the public and other stakeholders. Public sector employees who can effectively manage their emotions are better equipped to deal with difficult or sensitive situations, such as emergency response, crisis management, or conflict resolution. They can also better communicate with the public and maintain a professional demeanour in challenging circumstances. Effective emotional management is essential for success in any workplace, whether in the private or public sectors. It can help individuals build stronger relationships, make better decisions, and achieve their goals more effectively.

Research suggests a relationship between self-esteem and MDSE. Self-esteem can be defined as an individual's overall evaluation of their worth or value (Baumeister *et al.*, 2003). On the other hand, self-efficacy refers to an individual's belief in their ability to perform a specific task or achieve a specific goal (Locke, 1997). Studies have found that individuals with higher levels of self-esteem tend to have greater levels of self-efficacy across various domains, including decision-making (Stajkovic & Luthans, 1998, 2003). This suggests that self-esteem may shape an individual's confidence in their ability to make effective decisions as a manager.

One study examined the relationship between self-esteem, self-efficacy, and managerial performance. The study found that self-efficacy fully mediated the relationship between self-esteem and managerial performance, suggesting that self-efficacy is an essential factor in the relationship between self-esteem and managerial effectiveness (Kiazad *et al.*, 2014). Overall, research suggests a positive relationship between self-esteem and MDSE. Managers with higher levels of self-esteem may be more likely to have greater confidence in their decision-making abilities, which may lead to improved managerial performance.

6.4.4 Differences in IWB between Gender, Age Groups, Qualification Level, Years of Experience, Managerial Levels and Sectors

The IWB Scores Range from a Minimum of 1 to a Maximum of 100. Cohen's $D = .09$, which these criteria define as small. The Descriptive Statistics for This Study's Five Factors of IWB Participants

Were, on Average, Moderately Engaged in Each Stage. The IWB construct had a more significant impact on the male sample ($M = 7.07$, $SD = .73$) than the female ($M = 4.01$, $SD = .74$). The t-p Value Indicated a Score of .281. In Contrast, Cohen's d-test Indicated a Score of .09. This Results in a P-value of .281, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample.

These findings suggest that male respondents reported a higher variation in the construct IWB than female respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not have equal variances. Because of the small effect size, the variance in the association between IWB and this construct has limited practical applicability in real-life situations.

No evidence suggests that men perform better at IWB than women. Both men and women can be highly innovative and creative in the workplace, and the effectiveness of innovation is mainly dependent on individual skills, experiences, and other personal factors. Research has shown that gender diversity in teams and organisations can lead to more incredible innovation and creativity. This is because diverse perspectives and experiences can lead to a broader range of ideas and approaches and help identify potential blind spots or biases. However, gender bias and stereotypes can sometimes lead individuals to perceive men as more innovative or creative than women, even when their skills and abilities are similar. Recognising and addressing these biases is essential to ensure everyone has an equal opportunity to contribute their ideas and perspectives in the workplace.

The mean score for Opportunity Exploration indicates that participants tended to explore opportunities for innovation moderately. The IWB construct, Opportunity Exploration, had a more significant impact on the male sample ($M = 4.20$ $SD = .85$) than the female ($M = 4.16$, $SD = .88$). The t-p value indicated a score of .621. In contrast, Cohen's d-test indicated a score of .04, resulting in a p-value of .621, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .04$, which these criteria define as small.

These findings suggest that male respondents reported a higher variation in the construct of Opportunity Exploration than female respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not have equal

variances. Because of the small effect size, the variance in the association between gender and this construct limited practical applicability in real-life situations.

There is no evidence suggesting that men explore innovation opportunities more than women. Both men and women can seek out and explore opportunities for innovation in the workplace. The extent to which individuals engage in this behaviour is mainly dependent on their characteristics, experiences, and organisational culture. However, research has shown that gender bias and stereotypes can sometimes lead to differences in how men and women perceive their innovative behaviour. For example, women may be less likely to be recognised or rewarded for their innovative contributions. They may face greater scrutiny or resistance when they try to bring new ideas or approaches to the workplace. It is essential to recognise and address these biases to create a more inclusive and supportive environment for innovation in the workplace. This can involve efforts to encourage diversity and inclusion, provide training and resources for innovation, and ensure everyone has an equal opportunity to contribute their ideas and perspectives.

The mean score for idea generation indicates that participants tended to generate ideas moderately. The IWB construct, idea generation, had a more significant impact on the male sample ($M = 4.08$, $SD = .82$) than the female ($M = 4.01$, $SD = .82$). The t-p value indicated a score of .313. In contrast, Cohen's d-test indicated a score of .08, resulting in a p-value of .319, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .08$, which these criteria define as small.

These findings suggest that male respondents reported a higher variation in the construct idea generation than female respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

There is no evidence to suggest that men generate more ideas than women. Both men and women can generate creative and innovative ideas in the workplace, and the effectiveness of idea generation is mainly dependent on individual skills, experiences, and other personal factors. Research has shown that gender diversity in teams and organisations can lead to more significant idea generation and creativity. This is because diverse perspectives and experiences can lead to

a broader range of ideas and approaches and help identify potential blind spots or biases. However, gender bias and stereotypes can sometimes lead individuals to perceive men as more creative or innovative than women, even when their skills and abilities are similar.

The mean score for Idea promotion indicates that participants tended to promote ideas to a moderate extent. The IWB construct, Idea Promotion, had a more significant impact on the male sample ($M = 4.06$, $SD = .80$) than the female ($M = 3.99$, $SD = .81$). The t-p value indicated a score of .294. In contrast, Cohen's d-test indicated a score of .09, resulting in a p-value of .294, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .09$, which these criteria define as small.

These findings suggest that male respondents reported a higher variation in the construct Idea Promotion than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not equal variances. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

Research has shown that gender stereotypes and bias can influence how ideas are perceived and evaluated in the workplace. For example, men may be perceived as more assertive or confident when they promote their ideas, while women may be perceived as more collaborative or deferential. This can lead to men being more likely to have their ideas accepted and implemented, even when their ideas are not necessarily better than those of their female colleagues. However, it is essential to note that these differences are not universal, and many women are highly effective at promoting their ideas in the workplace. Additionally, efforts to promote gender equality and diversity in the workplace can help address these biases and ensure everyone has an equal opportunity to contribute their ideas and perspectives.

The mean score for Idea realisation indicates that participants tended to realise ideas moderately. The IWB construct, Idea Realisation, had a more significant impact on the male sample ($M = 4.03$, $SD = .75$) than the female ($M = 3.94$, $SD = .76$). The t-p value indicated a score of .138. In contrast, Cohen's d-test indicated a score of .12, resulting in a p-value of .138, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .12$, which these criteria define as small.

These findings suggest that male respondents reported a higher variation in the construct Idea Realisation than male respondents. Statistical findings indicated a significant probability that the relationship between this construct and gender variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not have equal variances. A significant effect size means the research finding has practical significance, while a small effect size indicates limited practical applications. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

There is no evidence to suggest that men realise ideas more than women. Both men and women can turn ideas into reality in the workplace, and the effectiveness of Idea Realisation is mainly dependent on individual skills, experiences, and other personal factors. Research has shown that gender diversity in teams and organisations can lead to greater Idea Realisation and innovation. This is because diverse perspectives and experiences can lead to a broader range of ideas and approaches and help identify potential blind spots or biases. However, gender bias and stereotypes can sometimes lead individuals to perceive men as more effective at turning ideas into reality than women, even when their skills and abilities are similar.

The mean score for Idea Sustainability indicates that participants tended to sustain ideas moderately. The IWB construct, the Idea of Sustainability, had a more significant impact on the male sample ($M = 4.03$, $SD = .82$) than the female ($M = 3.98$, $SD = .80$). The t -p value indicated a score of .512. Cohen's d -test indicated a score of .05, resulting in a p -value of .512, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .05$, which these criteria define as small.

These findings suggest that male respondents reported a higher variation in the construct Idea Sustainability than male respondents. Statistical findings indicated a significant probability that the relationship between the Impostor Phenomenon and gender variables exists. Variance is not homogeneous between the two groups. Therefore, the populations do not have equal variances. A significant effect size means the research finding has practical significance, while a small effect size indicates limited practical applications. Because of the small effect size, the variance in the association between gender and this construct has limited practical applicability in real-life situations.

There is no evidence to suggest that men sustain ideas more than women. Sustaining ideas requires various skills and abilities, such as strategic thinking, planning, collaboration, and persistence. These skills are not gender-specific, and both men and women can effectively sustain ideas in the workplace. However, gender bias and stereotypes can sometimes lead individuals to perceive men as more effective at sustaining ideas than women, even when their skills and abilities are similar. This can lead to women being overlooked or undervalued for their contributions to idea development and implementation. It is essential to recognise and address these biases to create a more inclusive and supportive environment for sustained innovation in the workplace.

Research suggests that gender may play a role in IWB, but the results are mixed and may depend on the specific context and industry being examined. Some studies have found that men exhibit more innovative behaviour in the workplace than women. For example, Research by Ahuja and Lampert found that male engineers were likelier to engage in innovative behaviour than female engineers (Ahuja & Morris Lampert, 2001). Similarly, another study by Salter and colleagues found that male scientists were likelier to commercialise their research than female scientists (Tartari & Salter, 2015).

While some research suggests that gender may play a role in IWB, the results are mixed and may depend on the specific context and industry being examined. However, other studies have found that gender differences in IWB are insignificant or dependent on other factors. Additionally, research by Brixiová and Kangoye found that while men were more likely to engage in patenting activities, there were no significant gender differences in innovation output or productivity (Brixiová & Kangoye, 2017).

There is a significant correlation between age and IWB. There is a significant correlation at the 0.01 level for *Opportunity Exploration*, *Idea Realisation*, *Idea Sustainability*, *Idea Promotion* and *idea generation*. This indicates a slight relationship between age and the constructs.

The literature suggests that age can impact IWB, but the impact may vary depending on the context and factors involved. Some studies suggest that older workers may be less likely to engage in IWBs, such as generating new ideas, experimenting with new methods, and taking risks (Shin & Zhou, 2003). This may be partly due to age-related cognitive flexibility and creativity declines and a tendency toward risk aversion and resistance to change. Other research suggests that older workers may be just as innovative as younger workers and may even have certain advantages regarding innovation (e.g., Baltes *et al.*, 1999; Kanfer & Ackerman, 2004). For

example, older workers may have more knowledge and experience to help them identify new opportunities and solutions and more robust networks and relationships supporting innovation. Furthermore, some research has found that age may not significantly impact IWB (Amabile *et al.*, 1996; Scott & Bruce, 1994). While age may play a role in IWB, the relationship is complex and may depend on various individual, situational, and organisational factors.

A significant correlation exists between the highest qualification and IWB. These values show no correlation between Idea Sustainability and Opportunity Exploration. There is a significant correlation at the 0.05 level between the factors of Idea Promotion and the IWB scale. There is a highly significant correlation at the 0.01 level between Idea Realisation and idea generation. This indicates a slight relationship between the highest qualification and the constructs.

Evidence suggests that higher qualifications may be positively associated with IWB (Wu & Parker, 2017). Higher levels of education reported higher levels of IWB, as measured by their willingness to generate and implement new ideas and take risks. However, it is essential to note that the relationship between education level and IWB may also be influenced by other factors such as job characteristics, organisational culture, and individual characteristics.

A significant correlation exists between managerial/leadership experience and innovative work behaviour. Correlations are significant at the 0.01 level for Opportunity Exploration, Idea Sustainability, Idea Realisation, idea generation and Idea Promotion. This indicates a slight relationship between managerial/leadership experience and the constructs. According to the evidence, years of leadership experience may impact IWB, though the findings of studies are conflicting and complicated. One study found that years of leadership experience were positively associated with innovative behaviour and the ability to create a supportive environment that fostered innovation (Zhang *et al.*, 2011). Other research found that while the experience was positively related to innovative behaviour, this relationship was stronger for managers who were more proactive and willing to take risks (Rosing *et al.*, 2011).

There is a significant correlation between the highest qualification and IWB; there is a significant correlation for the factor Idea Sustainability. Correlation is highly significant at 0.01 for factors Idea Realisation, Opportunity Exploration, idea generation, and Idea Promotion. This indicates a slight relationship between managerial/leadership roles and the constructs.

Research has found that the role of managers may influence their leadership style's effect on IWB. Transformational leaders inspire and motivate their employees, promote intellectual

stimulation, and encourage employees to think outside the box. This leadership style facilitates and encourages IWB among employees (Zhang *et al.*, 2015). In contrast, managers who exhibit transactional leadership behaviours may hinder IWB. This leadership style relies on rewards and punishments to motivate employees and may not provide the intellectual stimulation or encouragement to think creatively necessary for IWB (Zhang *et al.*, 2015).

The statistical findings of this study will be presented, followed by a discussion on each sub-construct. The correlational results for gender will be presented in the next section.

The IWB scores range from a minimum of 1 to a maximum of 100. The descriptive statistics for this study's five factors of innovative work behaviour participants were, on average, moderately engaged in each stage. The IWB scale had a similar impact on the private sector sample ($M = 4.04$, $SD = .72$) and public sector ($M = 4.04$, $SD = .75$). The t-p value indicated a score of .982. In contrast, Cohen's d-test indicated a score of .00.

These findings suggest that the private sector respondents reported a higher variation in IWB than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

IWB can occur in both the private and public sectors. Both sectors can have unique challenges and opportunities for innovation, and the effectiveness of innovation is mainly dependent on individual skills, experiences, and other personal factors, as well as the organisational culture and resources available. In the private sector, innovation is often driven by competition and the need to stay ahead of market trends and consumer preferences. Companies may invest in research and development, encourage employee creativity and idea generation, and work to create a culture of innovation. In the public sector, innovation is often driven by the need to provide better services to citizens and solve complex social and environmental problems. Government agencies may invest in research and development, partner with private sector organisations or non-profits, and encourage employee creativity and idea generation. Overall, both sectors can benefit from IWB, and there is a growing recognition of the importance of innovation in driving economic growth, social progress, and sustainability.

The mean score for Opportunity Exploration indicates that participants tended to explore opportunities for innovation moderately. The IWB construct, Opportunity Exploration, had a similar

significant impact on the private sector sample ($M = 4.19$, $SD = .83$) and public sector sample ($M = 4.18$, $SD = .90$). The t-p value indicated a score of .837. In contrast, Cohen's d-test indicated a score of .02, resulting in a p-value of .837, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .02$, which these criteria define as small.

These findings suggest that the private sector respondents reported a higher variation in the construct and Opportunity Exploration than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Idea exploration can affect both the private and public sectors. The private sector refers to organisations owned and operated by private individuals or groups. In contrast, the public sector refers to organisations owned and operated by the government or other public entities. In the private sector, idea exploration often focuses on developing new products or services, improving existing products or services, or finding more efficient operating methods. This can lead to increased competitiveness, growth, and profitability for businesses. In the public sector, idea exploration often focuses on improving public services, developing new policies, or addressing social and environmental challenges. This can lead to better outcomes for citizens, more effective use of public resources, and increased public trust and confidence in government. However, the specific impact of idea exploration will depend on a range of factors, such as the organisational culture, the resources available, and the level of stakeholder support and commitment. Creating a supportive environment that encourages and rewards innovation and idea exploration is essential to achieving the best possible outcomes in both the private and public sectors.

The mean score for idea generation indicates that participants tended to generate ideas moderately. The IWB construct idea generation had a similar significant impact on the private sector sample ($M = 4.05$, $SD = .81$) and public sector sample ($M = 4.05$, $SD = .83$). The t-p value indicated a score of .962. Cohen's d-test indicated a score of .00, resulting in a p-value of .962, above the defined significance level of 5%. Thus, there is equality in the sample. The Levene test is, therefore, not significant, and the null hypothesis is confirmed.

These findings suggest that the private sector respondents reported a higher variation in the construct and idea generation than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector

variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Idea generation can affect both the private and public sectors. In the private sector, idea generation often focuses on developing new products or services, improving existing processes, and identifying new markets or business opportunities. This can help businesses stay competitive and adapt to changing market conditions. In the public sector, idea generation often focuses on improving public services and addressing societal challenges. This can involve developing new policies, programmes, and initiatives that improve quality of life, promote economic growth, and address poverty, inequality, and environmental sustainability. In both sectors, idea generation is essential for driving innovation and progress and addressing complex problems and challenges. However, the approaches and priorities for idea generation may differ between the private and public sectors based on their goals and objectives.

The mean score for Idea promotion indicates that participants tended to promote ideas to a moderate extent. The IWB construct, Idea Promotion, had a similar significant impact on the private sector sample ($M = 4.03$, $SD = .78$) and public sector sample ($M = 4.03$, $SD = .83$). The t -p value indicated a score of .981. In contrast, Cohen's d -test indicated a score of .00, resulting in a p -value of .981, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .00$, which these criteria define as small.

These findings suggest that the private sector respondents reported a higher variation in the construct Idea Promotion than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Idea promotion can affect both the private and public sectors. In the private sector, Idea Promotion can help organisations identify new opportunities, develop innovative products or services, improve efficiency and effectiveness, and increase profitability. For example, companies may invest in research and development to generate new ideas and innovations. They may use marketing and advertising campaigns to promote these ideas to potential customers and investors. In the public sector, Idea Promotion can help to drive social and economic

development, address public issues and challenges, and improve public services and programmes. For example, governments may launch initiatives to promote innovation and entrepreneurship, encourage public engagement and participation, and develop policies and programmes that support sustainable development and social justice. Idea Promotion can significantly impact the private and public sectors and help drive progress and positive change in various areas.

The mean score for Idea realisation indicates that participants tended to realise ideas moderately. The IWB construct, Idea Realisation, had a similar significant impact on the private sector sample ($M = 3.99$, $SD = .74$) and public sector sample ($M = 3.99$, $SD = .77$). The t-p value indicated a score of .969. In contrast, Cohen's d-test indicated a score of .00, resulting in a p-value of .969, above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = .00$, which these criteria define as small.

These findings suggest that the private sector respondents reported a higher variation in the construct and Idea Realisation than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Idea realisation can affect both the private sector and the public sector. The private sector includes businesses and organisations that are privately owned and operated, while the public sector includes government agencies and institutions that taxpayers fund. In the private sector, Idea Realisation can lead to new products, services, and processes that can improve efficiency, increase profits, and enhance competitiveness. This can be particularly important for small and medium-sized businesses, which may rely on innovation to stay ahead of the competition. Idea Realisation can improve government services and programmes, improve citizen outcomes, and increase accountability and transparency in the public sector. For example, ideas about improving access to healthcare, reducing crime rates, or protecting the environment can significantly impact society. Overall, Idea Realisation is essential for both the private and public sectors, as it can lead to new opportunities, better outcomes, and improved quality of life for individuals and communities.

The mean score for Idea Sustainability indicates that participants tended to sustain ideas moderately. The IWB construct, Idea Sustainability, had a similar significant impact on the private sector sample ($M = 4.01$, $SD = .81$) and public sector sample ($M = 4.01$, $SD = .82$). The t-p value indicated a score of .892. Cohen's d-test indicated a score of -.01, resulting in a p-value of .892 above the defined significance level of 5%. The Levene test is, therefore, not significant, and the null hypothesis is confirmed. Thus, there is equality in the sample. Cohen's $d = -0.1$, which these criteria define as small.

These findings suggest that the private sector respondents reported a higher variation in the construct and Idea Sustainability than public sector respondents. Statistical findings indicated a significant probability that the relationship between this construct and differences in their sector variables exists. Variance is homogeneous between the two groups. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

In the private sector, the sustainability of ideas is crucial because it directly impacts a company's profitability and long-term success. If a company's ideas are not sustainable, it may struggle to remain competitive, lose market share, and eventually fail. Therefore, private companies often prioritise sustainable ideas that align with their business objectives and contribute to their long-term growth. In the public sector, the sustainability of ideas is also essential because it can significantly impact society and the environment. Public sector organisations, such as governments and non-profit organisations, often work to promote sustainability in their policies and initiatives. For example, public sector organisations may promote sustainable agriculture, energy, and transportation practices to reduce their environmental impact and promote long-term sustainability. Overall, the sustainability of ideas is essential to both the private and public sectors, and both have a role to play in promoting sustainability and ensuring the long-term success of their organisations.

Research suggests that self-esteem can affect IWB. Higher self-esteem levels have been associated with more outstanding IWB (Hunsaker & Ding, 2022; Zhang *et al.*, 2023). One possible explanation for this relationship is that individuals with higher self-esteem may have greater confidence in their abilities, leading to a greater willingness to take risks and pursue innovative ideas. Higher self-esteem may also be associated with greater resilience in the face of failure or setbacks, which can be crucial in innovation (Sekścińska & Rudzinska-Wojciechowska, 2022).

However, it is essential to note that the relationship between self-esteem and IWB may not always be straightforward. For example, one study found that the relationship between self-esteem and IWB was moderated by job autonomy, such that the positive relationship between self-esteem and IWB was more robust for individuals with high levels of job autonomy (Suhandiah *et al.*, 2023). Overall, while there may be a positive relationship between self-esteem and IWB, the specific nature of this relationship may depend on various individual and situational factors.

The third question of the research was to determine if there are differences in the Impostor Phenomenon, self-esteem, decision-making self-efficacy, and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors. The data above proves that the Impostor Phenomenon affects different areas of leaders who experience the Impostor Phenomenon. Based on the evidence presented above, there are differences in the Impostor Phenomenon of self-esteem, decision-making self-efficacy, and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors. This data supports the hypothesis that the Impostor Phenomenon affects individuals in different areas, depending on their gender, age groups, management levels, industries, and sectors. More research is advised to understand the impact of this phenomenon in these areas.

The following section will address the research question of self-esteem mediating the relationship between the Impostor Phenomenon and these constructs.

6.5 MEDIATOR ROLE OF SELF-ESTEEM IN THE RELATIONSHIP BETWEEN THE IMPOSTOR PHENOMENON, DECISION-MAKING SELF-EFFICACY, AND INNOVATIVE WORK BEHAVIOUR

The fourth objective was to establish if self-esteem mediates the relationship between the Impostor Phenomenon, decision-making self-efficacy, and IWB. The information provided in Section 4.9 and Section 5.7 were used to support the findings for Research Objective 4: If self-esteem mediates the relationship between the IP, MDMSE and IWB.

The data findings are presented in the next section, describing the mediating role of self-esteem between constructs. The first section presents the mediator role of self-esteem in the relationship between the IP and MDMSE and the mediation role with sub-constructs.

Data supports the theory that self-esteem mediates the link between the IP and MDMSE. It has been established that one's self-efficacy beliefs impact how well and effectively one manages

factual issues and forms opinions. When confronted with difficult circumstances and choices, individuals who are secure and confident in making decisions and dealing with problems make better use of their intellectual capabilities than those who lack that confidence (Kim, 2015).

It has been demonstrated that self-efficacy affects organisational success by affecting choices. Self-efficacy beliefs impact a person's emotional reactions to challenges and assessments of differences between success and objectives in the present. Bandura and Wood (1989) found that when participants were assigned decision-making tasks intended to achieve specific levels of organisational performance, high levels of self-efficacy encouraged the adoption of higher standards and more analytical problem-solving methods to enhance performance.

Self-esteem is a crucial component of living that impacts various things, such as success and employment. Self-esteem and other fundamental self-assessments significantly influence self-efficacy in making professional choices (Betz *et al.*, 1996). When there is certainty rather than doubt, it might be simpler to decide and give judgement. As a result, those with higher decision-making self-efficacy may be less prone than those with lower levels to suffer post-decision self-regulatory fatigue (Russell & Worsley, 2013).

Low self-efficacy has been associated with both subpar achievement and poor decision-making. According to Bandura and Jourden (1991), decision-makers who felt they were making headway on organisational duties outperformed other decision-makers regarding success, goal-setting, and organisational performance. Additionally, it has been proven that self-efficacy and selection are connected by using self-effect efficacies on professional growth.

Research indicated that the IP negatively impacts career study, planning, and occupational self-efficacy but favourably impacts decision-making (Neureiter & Traut-Mattausch, 2017). According to the findings, making more deliberate choices and having greater self-esteem are related. Impostors with low self-esteem lack the self-assurance necessary to make informed choices; typical coping mechanisms include avoidance, delay, negligence and hypervigilance (Filippello *et al.*, 2013).

It has been shown that self-efficacy impacts organisational success through decision-making. Bandura and Wood (1989) found that high levels of self-efficacy encouraged implementing higher standards and more analytical problem-solving techniques to improve performance when participants were assigned decision-making tasks to complete. When they thought they were making headway on organisational tasks, decision-makers were more efficient, set more complex

objectives, and surpassed their peers in organisational performance (Bandura, 1993; Bandura & Jourden, 1991; Lent *et al.*, 1994).

The following section presents the mediator role of self-esteem in the relationship between the IP and MDMSE.

Based on this study's findings in Chapter 5, self-esteem partially mediates the relationship between the IP and MDMSE primary constructs. The IP and MDMSE relationship indicates partial mediation. Based on the data presented, there is a partial mediation of 53.67% by self-esteem in the relationship between the IP and MDMSE. There is limited research on whether self-esteem mediates the relationship between IP and MDMSE. However, research suggests that the IP influences self-esteem and decision-making self-efficacy. Individuals with the IP tend to have lower levels of self-esteem (Sakulku & Alexander, 2011).

It is anticipated that low self-esteem mediates the relationship between the imposter phenomenon and self-efficacy due to the psychological interplay between these constructs. The imposter phenomenon, characterised by feelings of inadequacy and a fear of being exposed as a fraud despite accomplishments, can erode one's self-esteem by fostering self-doubt and undermining a sense of competence. This diminished self-esteem, in turn, can impede the development of self-efficacy, as individuals experiencing the imposter phenomenon might struggle to believe in their capabilities and accomplishments. Consequently, low self-esteem acts as an intermediary factor that weakens the association between the imposter phenomenon and self-efficacy, as the negative impact of the former cascades into the latter, inhibiting the development of a robust belief in one's capacity to achieve and succeed.

Low self-esteem can affect a person's confidence in their abilities and lead to negative self-talk, anxiety, and self-doubt. This, in turn, can impact a person's decision-making abilities, as they may struggle to make confident decisions due to self-doubt and fear of failure. Additionally, the IP can also negatively impact a person's self-efficacy. Self-efficacy refers to a person's belief in their ability to accomplish a task or achieve a goal (Bandura, Freeman, *et al.*, 1999). Individuals with the IP may struggle with their self-efficacy, as they doubt their abilities and feel like frauds despite evidence of their competence.

This can lead to a lack of confidence in their ability to complete tasks, resulting in decreased self-efficacy. The IP can significantly impact a person's self-esteem, self-efficacy, and decision-making abilities. However, it is essential to note that these effects can vary from person to person and may depend on the severity of their IP and coping mechanisms.

This section discusses the mediator role of self-esteem in the relationship between the IP and MDMSE, specifically focusing on the mediating role with specific IP sub-constructs.

6.5.1 Self-Esteem and Its Relationship with IP and MDMSE

Self-esteem does not appear to be why IP affects an individual's ability to make managerial decisions. One possible explanation is that the IP is a unique phenomenon distinct from self-esteem. While self-esteem refers to an individual's overall sense of self-worth, the IP relates explicitly to feelings of self-doubt and a fear of being exposed as fraud, despite the evidence. Therefore, even with high self-esteem, individuals may still experience the IP and struggle with MDMSE. Additionally, research has found that the relationship between IP and MDMSE is influenced by other factors such as anxiety, perfectionism, and fear of failure. These factors may impact an individual's decision-making abilities more than self-esteem. While self-esteem may be necessary for overall psychological well-being, it does not play a significant role in the relationship between IP and MDMSE. Based on the evidence presented above, it can be concluded that self-esteem partially mediates the relationship between IP and MDMSE.

6.5.2 Self-Esteem and Its Relationship to IP and IWB

Self-esteem is not a statistically relevant mediating variable between the IP and IWB. No data found in the literature supported this.

6.5.3 Self-Esteem and Its Relationship with IP and MDMSE

Based on this study's findings in Chapter 5, self-esteem completely mediates the relationship between the primary constructs of the IP and IWB. Research suggests that there may be a relationship between the IP and IWB and that self-esteem may mediate this relationship. The literature indicates that IWB refers to creating, developing, and implementing new ideas, products, or processes within an organisation. The IP can significantly impact a person's self-esteem, which, in turn, can impact their IWB. Research suggests that individuals with IP tend to have lower levels of self-esteem (Sakulku, 2011). This can lead to a lack of confidence in their abilities, including their ability to develop and implement innovative ideas. Individuals with IP may struggle to take risks and try new things due to their fear of failure and self-doubt, which can impede their IWB.

Individuals with IP may also be hesitant to share their innovative ideas with others as they fear being exposed to fraud. This can hinder their ability to collaborate, seek feedback, and receive

recognition for their innovative contributions. However, it is essential to note that while the IP can impact a person's self-esteem and IWB, it is not a definitive barrier to innovation. Individuals with IP can still develop and implement innovative ideas with the proper support, encouragement, and resources. In conclusion, IP can harm a person's self-esteem and IWB. However, with the proper support and resources, individuals with the Impostor Phenomenon can still contribute to innovation within their organisations.

6.5.4 The Relationship between the IP and IWB Sub-Constructs

Based on this study's findings in Chapter 5, the relationship between the IP and IWB sub-constructs, self-esteem mediates competence doubt through self-esteem to IWB completely. There is no mediation with self-esteem for any of the other IP sub-constructs. Self-esteem can significantly influence competence doubt, which is the feeling of uncertainty about one's ability to perform a particular task or achieve specific goals. Individuals with low self-esteem are more likely to experience competence doubt as they tend to doubt their abilities and capabilities, leading to a lack of self-confidence. Similarly, other studies have shown that individuals with low self-esteem tend to underestimate their abilities, leading to feelings of incompetence and a lack of confidence (Robins & Trzesniewski, 2005).

Individuals with the IP tend to attribute their success to external factors, such as luck, rather than internal factors, such as their abilities, which can further lead them to doubt their competence (Sakulku, 2011). On the other hand, individuals with high self-esteem tend to have more confidence in their abilities, leading to less competence doubt. They are more likely to see challenges as opportunities for growth rather than obstacles to be feared (Baumeister *et al.*, 2003). Self-esteem can be important in the relationship between competence doubt and IWB. Overall, research suggests that self-esteem plays a crucial role in influencing competence doubt, with individuals with low self-esteem being more likely to experience doubts about their abilities and capabilities. Competence doubt, or the belief that one lacks the necessary skills or abilities to perform a task, can lead to feelings of low self-esteem.

On the other hand, individuals with high self-esteem are more likely to feel competent in tackling challenges, which can foster a sense of innovation and creativity. However, it is essential to note that while the IP can negatively impact a person's IWB, it is not an insurmountable barrier. With the proper support, encouragement, and resources, individuals with IP can still develop and implement innovative ideas within their organisations.

The fourth objective was determining if self-esteem mediates the relationship between the Impostor Phenomenon, decision-making self-efficacy, and IWB. Based on the evidence presented above, it can be concluded that self-esteem partially mediates the relationship between the IP and MDMSE and fully mediates the relationship between the IP and IWB.

The following section addresses the last research question on whether a relationship exists between the construct and South African leaders' behaviour.

6.6 RELATIONSHIP BETWEEN THE IMPOSTOR PHENOMENON, DECISION-MAKING EFFICACY, AND INNOVATIVE WORK BEHAVIOUR OF MANAGERS/ LEADERS

The last research objective was to determine if there was a relationship between the IP, MDMSE and IWB of managers/ leaders in South Africa.

As discussed in Section 4.9 and Section 5.8, SEM, correlational coefficients, standardised (regression) coefficients, squared multiple correlations, χ^2 value/ degrees of freedom, RMSEA and CFI were used to support the findings for Research Objective 5.

The data findings are summarised in the next section. Extracts from the literature are used to support these findings. The first section presents the relationship between IP and the self-esteem construct.

Relationship between IP and the self-esteem construct.

The IP significantly impacts self-esteem. There is no correlation between self-esteem and ambition. There is a significant correlation between self-esteem and the constructs of competence doubt, alienation, working style, self-divergence and need for Sympathy. This indicates a strong relationship between an individual's self-esteem level and a person's feeling of inauthenticity and a tendency toward impression management, pro- and pre-procrastination tendencies by a high or low expression and their expectations of the environment are perceived as overstraining.

Based on this study's findings in Chapter 5, according to the correlations of the relationships between self-esteem and the IP sub-areas, the most vital relationship between the IP sub-constructs, and self-esteem are competence doubt, need for Sympathy and ambition. This indicates a strong relationship between an individual's self-esteem level and self-doubt, fear of failure and maladaptive perfectionism.

There is also a strong relationship between a person's need for Sympathy, measures of agreeableness, conflict-averseness, and desire to achieve something extraordinary. The weakest relationship between the IP sub-constructs and self-esteem was working style, other-self divergence and alienation. This indicates a strong relationship between an individual's self-esteem level and a person's feeling of inauthenticity and a tendency toward impression management, pro- and pre-procrastination tendencies by a high or low expression and their expectations of the environment are perceived as overstraining.

Data supports that self-esteem influences the IP. Self-esteem is a psychological word that measures how individuals perceive themselves, others, and the outside world favourably. Concerns about one's self-worth are at the root of the impostor problem (Harvey, 1981; Schubert & Bowker, 2019; Topping, 1983). Because self-esteem is a socially created and acquired concept, it is more of a psychological trait than a measure of well-being (Hewitt, 2020). One of the characteristics that could be related to the impostor effect is instability. One's capacity demonstrates high self-esteem for overcoming challenges, openness to interacting with others, and ability to balance societal responsibilities and individual requirements (Garrety *et al.*, 2003). Changes in self-esteem over time and reactions to shifting conditions are signs of self-esteem instability (Schubert & Bowker, 2019).

Data supports that self-esteem influences the IP. Healthy self-esteem is characterised by positive value perceptions that adapt to changing conditions without needing continuous reassurance and defence (Schubert & Bowker, 2019). According to Lanford and Clance (1993), Impostors are not provided with a supportive environment to foster robust self-esteem. Individuals who consistently value and accept themselves for who they are, faults and all, tend to value and accept themselves more than individuals who display impostor tendencies. Consequently, they aspire to become a perfect reflection of themselves. As a result, they are less likely to experience poor self-esteem problems and do not experience pressure to prove their value.

Data supports that self-esteem influences decision-making self-efficacy. It has been demonstrated that self-efficacy affects organisational success by affecting choices. When participants were given decision-making tasks to complete, Bandura and Wood (1989) found that high levels of self-efficacy promoted the adoption of higher standards and more methodical problem-solving methods to increase performance.

The relationship between the IP and self-esteem is complex, with research suggesting that the two are related but not necessarily in a straightforward way. On the one hand, some studies have

found that individuals who experience impostor feelings tend to have lower self-esteem than those who do not experience these feelings (e.g. Cokley *et al.*, 2013; Ferrari & Thompson, 2006). This may be because impostor feelings can lead individuals to doubt their abilities and achievements, eroding their confidence and self-esteem.

Research has also found that individuals who experience impostor feelings may have higher self-esteem levels in specific domains, such as academics or career success (e.g., Chrisman *et al.*, 1995; Clance & O'Toole, 2014). This may be because individuals who experience impostor feelings tend to set high standards for themselves and work hard to achieve them, which can lead to a sense of accomplishment and pride in their abilities. Overall, the relationship between the Impostor Phenomenon and self-esteem is not straightforward, and the direction of the relationship may depend on various factors, such as the specific domain in which impostor feelings arise and the individual's coping strategies for managing these feelings.

6.6.1 The Relationship between IP and the MDMSE Construct

The IP significantly impacts MDMSE by affecting all sub-constructs. This indicates that the IP impacted the respondents' logical reasoning and problem-solving skills, their engagement in creative thinking, how individuals can persuade and influence others, and how individuals manage their emotions. Interestingly it affected all impostor sub-constructs except ambition and the need for Sympathy. Based on this study's findings in Chapter 5, the correlations of these relationships between MDMSE and the IP sub-areas, the IP significantly impact the analytical and inferential efficacy constructs. There is no correlation: between analytical and efficacy and ambition and need for Sympathy. There is a significant correlation level for the constructs alienation working style, other-self divergence and competence doubt. The IP can hurt an individual's ability to reason logically and solve problems. Research suggests that individuals who experience the IP may be more likely to engage in negative self-talk, limiting their ability to think logically and creatively (Clance & O'Toole, 2014). Additionally, individuals who experience the IP may be more likely to second-guess their decisions and be overly cautious, which can hinder their ability to solve problems effectively (Ross *et al.*, 2001).

Furthermore, research has also found that individuals who experience the IP may be more likely to engage in avoidance coping strategies, such as procrastination and over-preparation, which can further limit their ability to reason and problem-solve (Parkman, 2016). The IP can harm an individual's ability to reason logically and solve problems, leading to negative self-talk, second-guessing and avoidance coping strategies.

Evidence suggests that the IP can impact how individuals reason logically and approach problem-solving. The IP is characterised by self-doubt, inadequacy, and persistent fear of being exposed as a fraud despite evidence of competence (Clance & Imes, 1978). These feelings can lead to a lack of confidence in one's abilities and a tendency to second-guess oneself. Research has found that individuals who experience the IP may engage in defensive reasoning, which involves avoiding challenges or tasks that could expose their perceived shortcomings (Bjornsen & Norem, 2012). This defensive reasoning can prevent individuals from fully engaging in problem-solving and may limit their ability to generate creative solutions to complex problems.

Overall, while the research on the impact of the IP on logical reasoning and problem-solving is limited, there is some evidence to suggest that individuals who experience the IP may be more prone to defensive reasoning and negative self-talk, which can undermine their confidence and ability to approach problem-solving productively and effectively. Additionally, individuals who experience the IP may be more likely to engage in negative self-talk, further undermining their confidence and ability to reason logically (Cokley *et al.*, 2013). This negative self-talk can lead to a self-fulfilling prophecy where individuals who doubt their abilities are more likely to make mistakes and experience failure, further reinforcing their feelings of inadequacy.

The IP significantly impacts the exploratory search and processing efficacy constructs. This suggests that the IP affects how individuals engage in creative thinking. There is no correlation between exploratory search and processing efficacy and the constructs, need for Sympathy and ambition. Correlation is significant at 0.01 for the constructs alienation working style, other-self divergence and competence doubt. The IP is a psychological phenomenon in which individuals doubt their abilities and have persistent feelings of inadequacy and self-doubt, despite evidence of their accomplishments and success. While the impact of the IP on creative thinking is not yet fully understood, some research suggests that it may have adverse effects. One study found that individuals who experience the IP may engage in less creative thinking because they are more likely to avoid situations where they may fail or be exposed as "frauds" (Kumar & Jagacinski, 2006). This avoidance behaviour may lead to missed opportunities for creative problem-solving and innovation.

Additionally, research has shown that individuals who experience the IP may engage in more rigid thinking patterns and be less willing to take risks, which could further inhibit creative thinking (Chrisman *et al.*, 1995). However, it is essential to note that not all research has found adverse effects of the IP on creative thinking. For example, Neureiter and Traut-Mattausch (2016) found that individuals who experience the IP may engage in more creative thinking when given

autonomy and control over their work. Overall, while the impact of the IP on creative thinking is still a topic of research and debate, there is some evidence to suggest that it may inhibit creative thinking and innovation. Research has found that individuals who experience the IP tend to have high anxiety levels, self-doubt, and fear of failure. These negative emotions can hinder creative thinking, interfering with an individual's ability to generate novel and innovative ideas (Clance & Imes, 1978).

Furthermore, individuals who experience the IP may be less likely to take risks and try new things. They may be afraid of making mistakes and being accused of being a fraud (Clance & Imes, 1978). This can limit their willingness to engage in creative thinking and may result in missed opportunities for innovation and growth. However, it is essential to note that not all individuals who experience the IP will necessarily have difficulty with creative thinking. Some may be able to use their self-doubt as a motivator to work harder and strive for excellence (Leary *et al.*, 2000). Additionally, supportive environments that encourage risk-taking and provide opportunities for experimentation and innovation may help individuals with impostor feelings to overcome their fears and engage in creative thinking. Overall, while the IP may present challenges for individuals looking to engage in creative thinking, individuals can overcome these challenges with the proper support and mindset.

The IP significantly impacts the exploratory search and processing efficacy constructs. The IP influences how individuals can persuade and influence others. There is no correlation between social influence efficacy and the constructs of ambition and the need for Sympathy. Correlation is significant at 0.01 for the constructs alienation working style, other-self divergence and competence doubt. Some evidence suggests that the IP may harm an individual's ability to persuade and influence others. One study found that individuals who experienced the IP tended to have lower self-confidence and self-efficacy, negatively affecting their ability to communicate effectively and influence others (Bernard *et al.*, 2002). Similarly, another study found that individuals who experienced the IP tended to have lower levels of assertiveness, which may make it more difficult for them to persuade and influence others (Sakulku, 2011).

While more research is needed to fully understand the relationship between the IP and an individual's ability to persuade and influence others, evidence suggests that the IP may harm these abilities. Some evidence suggests that the IP may harm an individual's ability to persuade and influence others. Research has shown that individuals who experience the IP may engage in self-handicapping behaviours, such as procrastination or avoidance, to protect themselves from potential failure or rejection (Chrisman *et al.*, 1995). These behaviours can negatively impact an

individual's ability to effectively communicate their ideas and persuade others to support their goals. Research has also found that individuals who experience the IP may be more likely to over-prepare and over-apologise, undermining their ability to persuade and influence others (Clance & Imes, 1978).

Additionally, individuals who experience the IP may struggle with self-confidence and self-esteem, making it difficult to assert themselves and advocate for their ideas (Grubb & McDowell, 2019). This lack of confidence can also make it challenging to establish credibility with others, which is vital for effective persuasion and influence. While the IP may negatively affect an individual's ability to persuade and influence others, the impact will likely vary depending on the individual and the specific context. It is worth noting that not all individuals who experience the Impostor Phenomenon will necessarily struggle with persuasion and influence. Some individuals may develop coping strategies to manage their feelings of self-doubt and insecurity, which can help them communicate their ideas and influence others effectively (Kumar & Jagacinski, 2006).

The IP significantly impacts the thought and affected control construct. There is no correlation between thought and affected control and the construct ambition. Correlation is significant at the 0.01 level for the following constructs, need for Sympathy, alienation, other-self divergence, working style and competence doubt.

6.6.2 The Relationship between the IP and Self-Esteem

The IP can influence how individuals manage their emotions. When individuals experience impostor feelings, they often feel like frauds who do not deserve their achievements, leading to negative emotions such as anxiety, stress, and self-doubt (Sakulku, 2011). These negative emotions can then affect how individuals manage their emotions daily. For example, one study found that individuals who experienced impostor feelings reported more difficulty regulating their emotions and were more likely to engage in emotion-focused coping strategies, such as venting or avoidance, than individuals who did not experience impostor feelings (Bernard *et al.*, 2002). This suggests that impostor feelings may lead to less effective emotion regulation strategies. Furthermore, the IP has also been associated with increased emotional exhaustion, burnout and reduced job satisfaction (Clance & O'Toole, 2014; Cokley *et al.*, 2013). These adverse outcomes can further affect an individual's ability to manage their emotions healthily, as they may feel overwhelmed, stressed, or disengaged from their work.

The IP can influence how individuals manage their emotions, leading to less effective coping strategies and adverse outcomes. It is vital for individuals who experience impostor feelings to seek support and develop healthy emotion regulation strategies to mitigate these effects. Research suggests that the IP can influence how individuals manage their emotions. Individuals who experience the IP often struggle with feelings of inadequacy, self-doubt, and fear of being exposed as a fraud. These emotions can lead to adverse outcomes such as anxiety, depression, and burnout (Chrisman *et al.*, 1995; Matthews & Clance, 1985).

Furthermore, individuals with the IP may also engage in maladaptive emotion regulation strategies such as avoidance, rumination, and self-blame. For example, they may avoid situations that could expose them as frauds or ruminate excessively about past mistakes or failures. However, some studies have also suggested that individuals with the IP may be motivated to work harder and achieve tremendous success to compensate for their inadequacy (Bernard *et al.*, 2002; Clance & Imes, 1978). This motivation can lead to positive outcomes such as academic and professional achievement. Overall, while the IP can negatively affect individuals' emotional well-being and ability to manage their emotions, it can also serve as a motivator for success. Further research is needed to understand the complex relationship between IP and emotion regulation fully.

This discussion is more about the relationship between IP and decision-making.

The data support this theory that the IP has a relationship with MDMSE. Impostorism will negatively impact self-esteem, contributing to self-esteem insecurity (Schubert & Bowker, 2019). According to some researchers, there is a tenuous connection between IP and self-esteem, showing that persons with low self-esteem are disproportionately impacted, with those with solid self-esteem making up a small minority.

For self-regulation to occur, decision-making and problem-solving abilities are required. It has been established that one's self-efficacy beliefs impact how well and effectively one manages issues and forms opinions. When confronted with difficult circumstances and choices, individuals who are secure in making decisions and dealing with problems make better decisions than those who lack that confidence (Kim, 2015). Results show that higher self-esteem is associated with superior reasoning and decision-making self-efficacy. Individuals with low self-esteem are less confident in their ability to make wise decisions: Avoidance, delaying, being irresponsible, and being overly vigilant are all common decision-making strategies for those who lack self-esteem.

(Filippello *et al.*, 2013). One with high self-efficacy can take on complex tasks that call for creative solutions (Hsiao *et al.*, 2011). Data, therefore, support this theory that the IP affects MDMSE.

Research has shown a negative relationship between IP and MDMSE. Individuals who experience the IP tend to have lower self-efficacy regarding decision-making (Cokley *et al.*, 2013). This may be because they tend to doubt their abilities and question their competence, undermining their confidence in decision-making. In contrast, individuals with higher MDMSE tend to be more confident in their decision-making abilities and are less likely to experience feelings of self-doubt and inadequacy (Chen *et al.*, 2004). This can benefit the workplace, as managers confident in their decision-making abilities are more likely to make decisions quickly and with conviction, leading to better outcomes for their organisation.

Research has found a positive relationship between ambition and MDMSE, which refers to an individual's belief in their ability to make effective decisions in their managerial role. Several studies have shown that more ambitious individuals have higher MDMSE. For example, one study found that ambitious individuals were more likely to believe in their ability to make effective decisions and were more confident in their decision-making abilities than less ambitious individuals (Judge & Bono, 2001). Additionally, another study found that individuals with higher levels of MDMSE were more likely to engage in ambitious behaviours, such as taking on challenging tasks and seeking new growth and development opportunities (Zhang & Bartol, 2010).

Overall, the research suggests that ambition and MDMSE are positively related, with ambitious individuals being more likely to believe in their ability to make effective decisions and take on challenging tasks. These findings suggest that more ambitious individuals may have greater confidence and belief in their abilities, which can translate into higher MDMSE. This, in turn, can lead to more effective decision-making and a greater willingness to take risks and pursue ambitious goals.

6.6.3 The Relationship between the IP and IWB Constructs

The IP significantly impacts IWB by affecting all sub-constructs. This indicates that the IP impacts individuals searching for new opportunities, taking advantage of an opportunity, considering new procedures and processes, organising or leading, creating innovative solutions and applying suggested workplace operations. Moreover, it impacts how individuals evaluate the outcomes to

ensure the proposed concept is successfully implemented. Remarkably, it affects all impostor sub-constructs except for ambition, in some instances, and the need for Sympathy.

Based on this study's findings in Chapter 5, the correlations of these relationships between IWB and the IP sub-areas. The following items indicated the most vital relationships: ambition, alienation and other-self divergence. The items with a lower indication of relationship are competence doubt, working style and need for Sympathy. While it is unclear how IP directly affects IWB, research has suggested that it can positively and negatively affect an individual's ability to engage in innovative behaviours. On the one hand, individuals experiencing IP may be more likely to engage in IWB to prove their competence and alleviate feelings of fraudulence (Cokley *et al.*, 2013). This can lead to increased creativity and risk-taking in their work.

While the relationship between IP and IWB is complex, research suggests that IP can positively and negatively influence an individual's ability to engage in innovative behaviours. On the other hand, research has also shown that IP can negatively affect an individual's willingness to engage in IWB. For example, individuals experiencing IP may avoid taking on new challenges or opportunities for fear of being exposed to fraud, limiting their ability to engage in IWB. Additionally, individuals experiencing IP may struggle to seek out and accept feedback, hindering their ability to learn and grow in their work.

The IP significantly impacts opportunity exploration. This phenomenon affects how individuals constantly search for new opportunities or emerging issues in the work setting. There is no correlation between opportunity exploration and the need for Sympathy. Correlation is significant at the 0.01 level for the constructs, alienation, ambition, other-self divergence, working style, and competence doubt. There is limited research on the relationship between the IP and IWB. Research has found that individuals with high levels of IWB tend to be more proactive in identifying new opportunities and emerging issues in their work setting (Janssen, 2000). These individuals are also more likely to experiment with new ideas and solutions to address these issues (De Jong & Den Hartog, 2010). Individuals experiencing the IP tended to be more cautious and risk-averse in their decision-making, which may impact their willingness to search for new opportunities.

The IP significantly affects relationship idea generation. This phenomenon impacts how individuals take advantage of a chance, create a fresh approach to a persistent or emerging issue, and consider new procedures and processes. There is no correlation between idea generation and the construct need for Sympathy. Correlation is significant at the 0.05 level for the following

constructs: working style and ambition. Furthermore, correlation is significant at the 0.01 level for the constructs: other-self divergence, alienation and competence doubt. The IP can impact how individuals take advantage of a chance, create a fresh approach to a persistent or emerging issue, and consider new procedures and processes. It can make individuals hesitant to take risks and try new things because they fear failure and being exposed as a fraud (Cameron & Pierce, 1994). Therefore individuals who experience the IP may be less likely to engage in IWB, which involves generating and implementing novel and valuable ideas. This may be because individuals with impostor feelings may doubt their ability to develop good ideas and fear being exposed as a fraud if their ideas fail.

Furthermore, research has also suggested that individuals who experience the IP may engage in “self-handicapping” behaviours, which involve creating obstacles or excuses for themselves to explain why they may fail (Zuckerman & Tsai, 2005). For example, they may procrastinate or not put in their total effort to avoid the possibility of failure. This behaviour can further limit their ability to take advantage of opportunities and try new things. Therefore, the IP may harm an individual’s willingness to take risks, generate new ideas, and try new approaches. It is essential to recognise and address these feelings to overcome their limitations on an individual’s creativity and innovation.

The IP significantly impacts idea promotion. This phenomenon impacts how individuals organise or lead a promotional gathering to persuade managers and donors to contribute the funds required to create innovative solutions. There is no correlation between idea promotion and the need for Sympathy. Correlation is significant at the 0.05 level for alienation and other-self divergence. Correlation is significant at the 0.01 level for the construct’s working style, competence doubt and ambition. In IP patterns, individuals doubt their abilities and feel like frauds despite evidence of their competence; it can potentially impact how individuals organise or lead promoting ideas and persuade managers to contribute to their innovative ideas. This can result in individuals avoiding or underperforming in their leadership role, which can negatively impact the success of the promotional gathering. Research has shown that individuals experiencing the IP may struggle with self-promotion and expressing their achievements, which can hinder their ability to persuade others (Chrisman *et al.*, 1995; Cokley *et al.*, 2013). Moreover, the fear of being exposed as a fraud can lead to over-preparation or perfectionism, negatively impacting the delivery and message of promoting ideas.

The IP significantly impacts idea realisation. This phenomenon impacts how individuals apply the suggested concept or answer to workplace operations. There is no correlation between Idea

realisation and the need for Sympathy. Correlation is significant at 0.01 for the constructs of ambition, competence doubt and working style. Correlation is significant at the 0.05 level for other-self divergence and alienation. The IP can impact how individuals apply suggested concepts or answers to workplace operations in several ways. Research has shown that individuals who experience the IP may be more likely to engage in self-handicapping behaviours, such as procrastination or seeking out external factors that could explain poor performance, as a way to protect their self-image and avoid potential failure (Chrisman *et al.*, 1995; Ferrari *et al.*, 1995). This psychological phenomenon, characterised by persistent feelings of inadequacy despite evidence of competence, can lead individuals to second-guess their decisions and hesitate to take action (Clance & Imes, 1978). This can lead to a reluctance to implement new concepts. Individuals may fear that they will be unable to implement them effectively or that their colleagues will discover that they are not as competent as they appear (Harvey & Katz, 1985). This can ultimately result in missed opportunities for innovation and growth.

The IP significantly impacts idea sustainability. This phenomenon impacts how individuals evaluate the outcomes of the suggested solutions against the initial set objectives and understand the actions that can be done to ensure that the proposed concept is successfully implemented. There is no correlation between sustainability and ambition and the need for Sympathy. Correlation is significant at the 0.01 level for the constructs of other-self divergence, alienation, working style and competence doubt.

The IP can impact how individuals evaluate the outcomes of suggested solutions against initial objectives and their ability to understand the actions required for successful implementation. The IP is characterised by self-doubt, fear of failure, and the belief that one's successes result from luck or other external factors rather than one's abilities (Clance & Imes, 1978). These beliefs can lead individuals to underestimate their abilities and question their judgement, which may affect their ability to evaluate the effectiveness of suggested solutions and take appropriate action.

The IP can impact an individual's ability to evaluate solutions and act towards successful implementation. It is vital for individuals who experience the IP to seek support and to recognise their strengths and achievements to overcome these feelings of self-doubt and fear of failure. This can make it challenging for them to assess the outcomes of suggested solutions against initial objectives and to determine the necessary actions for successful implementation. Additionally, individuals with the IP may be more prone to perfectionism and hesitant to take risks, limiting their ability to innovate and try new solutions (Cokley *et al.*, 2013).

Based on the evidence presented, it can be concluded that there is a relationship between the IP, MDMSE and IWB of managers/ leaders in South Africa.

6.7 SUMMARY OF FINDINGS

The findings can be summarised as follows:

Objective 1: To investigate the impostor phenomenon, self-esteem, decision-making self-efficacy and innovative work behaviour levels of managers.

The IP descriptive statistics indicated respondents had moderate impostor tendencies on all the sub-scales. Statistics indicated moderate levels of reasonable doubt in their abilities, a tendency towards perfectionism and overworking, moderate levels of feeling disconnected from their true self, moderate needs for external validation and some feelings of being disconnected from others.

The statistics on self-esteem indicated that, on average, participants had moderate self-esteem. The statistics on MDMSE indicated that, on average, participants had relatively high-level decision-making skills. The sub-scales indicated that respondents could manage their emotions and engage in creative thinking, although they sometimes struggled with logical reasoning and problem-solving and could persuade and influence others.

Descriptive statistics for this study's five factors of IWB indicated that respondents moderately explored opportunities and generate, promote, realise, and sustain ideas. These findings suggest that participants were engaged in each stage, but there was some inconsistency in their engagement levels.

Objective 2: To evaluate the impostor phenomenon, self-esteem, decision-making self-efficacy, and IWB measuring instruments' validity and reliability in the South African context.

The Cronbach Alpha coefficient results for the different sub-scales from this study provided coefficients ranging from .86 to .98. which can be deemed very good. The correlational values of the instruments ranged from .709 to .943, which were fairly high. The instruments for this study are therefore deemed reliable.

In terms of the model fit summary of these instruments, the following can be concluded: The χ^2 values for most models were a good model fit; however, the value of the self-esteem model represented a weak model fit. Based on the CFI and RMSEA reports, the self-esteem instrument

employed in this study did not demonstrate construct validity; hence, additional tests were performed.

Exploratory factor analysis confirmed whether one factor represented the phenomenon's underlying theoretical framework. The sphericity test by Bartlett for the self-esteem scale was statistically significant, indicative of a strong enough relationship between variables to support EFA. The KMO sampling adequacy metric produced a value of .875, indicating an adequate sample size. Therefore, the total variance of this self-esteem scale factor analysis can be accepted as valid. In terms of the baseline comparisons of all scales, the CFIs of these instruments were acceptable. The RMSEAs of the instruments indicated a good fit. It can therefore be concluded that the instruments used in this study were valid.

Objective 3: To determine the differences in the mean scores of the impostor phenomenon, self-esteem, decision-making self-efficacy, and IWB between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors.

All constructs in this study had a significant correlation with age, highest qualification, managerial experience and role. The IP relationship indicated an inverted relationship. Thus, if factors presented a low index, the respondent's impostor tendencies were higher. The remaining constructs had a direct relationship. The correlational statistics further indicated that these constructs had a small to medium relationship between age, highest qualification, managerial experience and role.

The results of the correlations between the constructs and gender imply that female respondents reported a higher variation in the IP than male respondents. These results imply that respondents' self-esteem scores were comparable for both men and women. Male respondents reported a more significant influence on the construct decision-making self-efficacy construct than female respondents. These results imply that, compared to female respondents, male respondents reported a bigger variation in the construct IWB.

Statistical findings indicated a significant probability that the relationship between these constructs and gender variables exists. Variance is homogeneous between the two groups in most correlations. Therefore, the populations have equal variances. Because of the small effect size, the variance in the association between gender and these findings has limited practical applicability in real-life situations.

These findings suggest that the private sector respondents reported a higher variation on all the research constructs than public sector respondents. Statistical findings indicated a significant probability that the relationship between these constructs and differences in their sector variables exists. The variance was not homogeneous between the two groups. Therefore, the populations did not have equal variances. Because of the small effect size, the variance in the association between sector variances and this construct has limited practical applicability in real-life situations.

Objective 4: To determine whether self-esteem mediates the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour.

Based on the data presented, self-esteem does not mediate the relationship between the IP and MDMSE sub-constructs. Based on the data presented, there is a partial mediation of 53.67% by self-esteem in the relationship between the IP and MDMSE primary constructs. Based on the data presented, self-esteem completely mediates the relationship between the IP and IWB.

Objective 5: To determine if there is a relationship between the Impostor Phenomenon, self-decision-making efficacy, and IWB of managers in South Africa.

The IP significantly impacts self-esteem. There is no correlation between self-esteem and ambition. There is a significant correlation between self-esteem and the constructs of competence doubt, alienation, working style, other-self divergence and need for Sympathy. This indicates a strong relationship between an individual's self-esteem level and a person's feeling of inauthenticity and a tendency toward impression management, pro- and pre-procrastination tendencies by a high or low expression and their expectations of the environment are perceived as overstraining.

The IP significantly impacts IWB by affecting all sub-constructs. This indicates that the IP has an impact on how individuals search for new opportunities, how to take advantage of an opportunity and consider new procedures and processes, how individuals organise or lead to creating innovative solutions, and apply suggested concepts in workplace operations, and lastly how individuals evaluate the outcomes to ensure that the proposed concept is successfully implemented. Remarkably, it affected all impostor sub-constructs except for ambition, in some instances, and the need for Sympathy.

There is a relationship between the IP sub-constructs and self-esteem. The following items indicate the most vital relationship: competence doubt, need for Sympathy and ambition. The items with a lower indication of relationship are working style, other-self divergence and alienation.

The following items indicated the most vital relationships: competence doubt, need for Sympathy and ambition. The items with a lower indication of relationship are working style, other-self divergence and alienation.

6.8 LIMITATIONS OF THIS STUDY

This study examined the relationship between IWB and MDMSE, and the IP. South African managers (leaders) were the focus of this investigation. This research establishes a connection between the IP and leadership skills, IWB, and decision-making; consequently, the study is constrained by the concepts determined by the research methodology. This study brings valuable insights into the relationship between the Impostor Phenomenon (IP) and key leadership competencies within the South African context. However, several further potential limitations should be acknowledged:

Limited Leadership Constructs: The study focuses solely on two leadership constructs, namely innovative work behaviour and decision-making self-efficacy. While these are important aspects, a more comprehensive view of leadership could encompass additional dimensions, potentially influencing a more holistic understanding of the impact of the Impostor Phenomenon on leadership behaviour.

Regional Specificity: The study's findings are context-specific to leaders in South Africa, which may limit the generalisability of the results to a broader global population. Cultural and socio-economic factors unique to South Africa might influence the relationships observed, and caution should be exercised when applying the findings to different cultural contexts.

Sample Selection: The study employs a convenience sample from the NWU Alumni, which might introduce selection bias. This could impact the representativeness of the sample and potentially influence the generalisability of the findings.

Self-Report Measures: The study relies on self-report measures, which might introduce response biases, such as social desirability or recall bias. Participants may not always accurately represent their experiences, leading to potential inaccuracies in the collected data.

Mediation Role of Self-Esteem: While the study investigates whether self-esteem acts as a mediator between the Impostor Phenomenon and leadership competencies, other potential

mediators could exist that are not explored in this study. Overlooking additional factors could provide an incomplete picture of the underlying dynamics.

Cross-Sectional Design: The study employs a cross-sectional design, which captures data at a single point in time. This limits the ability to establish causal relationships and the temporal sequence of events, preventing inferences about the directionality of the relationships.

Measurement Tools: The study adapts measurement instruments from existing works, but these instruments might not capture the entire complexity of the Impostor Phenomenon or leadership constructs. Differences in interpretation or cultural nuances might influence the validity of the measurements.

Lack of Qualitative Insight: A quantitative approach may not capture the nuanced experiences and subjective perceptions of leaders regarding the Impostor Phenomenon. Qualitative research methods could complement the quantitative findings by providing deeper insights into individual experiences.

Despite these limitations, the study is innovative in its exploration of the connection between the Impostor Phenomenon and specific leadership competencies within the South African leadership landscape. By addressing a gap in the existing body of knowledge, the study contributes valuable insights that can aid leaders in understanding, managing, and mitigating the potential negative effects of the Impostor Phenomenon on their leadership behaviours.

6.9 IMPLICATIONS OF THE STUDY

“At some point, you need to make a decision.
Boundaries don’t keep others out
They fence you in
Life is messy. That is how we are made
So, you can waste your life drawing lines
or you can live your life crossing them
- Anon.

In conclusion, this study effectively addresses a significant gap in the existing knowledge by illuminating the intricate relationship between the Impostor Phenomenon, innovative work behaviour, and decision-making self-efficacy within the unique context of South African leadership. The argument brought forward by Aparna and Menon (2020), is that the body of research currently available on the relationship between impostor phenomenon and leadership

qualities is currently insufficient (Aparna & Menon, 2020). However, their academic study concludes possible connections between the imposter phenomenon and essential leadership behaviours, particularly those involving decision-making and innovative work behaviour. The gap that currently exists where these hypothesized linkages have not been experimentally investigated is noteworthy. To close this academic gap, this research responded by empirically evaluating and substantiating these postulated correlations.

The scarcity of prior research exploring this interplay highlights the novelty and importance of this study's findings. By examining these specific leadership competencies in the context of the Impostor Phenomenon, this research not only contributes to a more holistic understanding of leadership dynamics but also offers valuable insights for leadership development and practice in the region.

The study's outcomes underscore the relevance of the Impostor Phenomenon's influence on decision-making self-efficacy and innovative work behaviour among South African leaders. By recognising the implications of the Impostor Phenomenon on these critical dimensions of leadership, this research equips leaders with actionable knowledge to overcome potential challenges and enhance their leadership effectiveness. The findings from this study provide valuable guidance for leaders to navigate decision-making processes, encourage innovation, and cultivate self-assurance, ultimately fostering more resilient and capable leadership practices in the dynamic landscape of South African leadership.

The influence of the Impostor Phenomenon on IWB and decision-making self-efficacy was determined in this study. With the results confirmed in this study, managers can identify, understand, manage, and control the impact of this phenomenon. When a manager possesses awareness of their imposter phenomenon tendencies, they hold the potential to effectively manage and mitigate the impact of this phenomenon on their professional performance. This self-awareness provides a crucial vantage point for recognising and challenging the negative thought patterns and self-doubt that the imposter phenomenon can engender. By acknowledging their feelings of inadequacy and realising that these sentiments are not necessarily reflective of their true competence, managers can take proactive steps to counteract its effects. They may seek out support systems, engage in self-affirmation techniques, and consciously celebrate their achievements, thereby bolstering their self-esteem and fostering a healthier self-perception. This self-awareness empowers managers to pre-emptively address the potential hindrances posed by the imposter phenomenon, ultimately enabling them to harness their skills, make confident decisions, and exhibit effective leadership qualities.

This study's primary objective was to create a framework to assess the influence of the Impostor Phenomenon on leadership competencies, namely, decision-making self-efficacy and innovative work behaviour. The study highlighted the role of self-esteem as a mediating variable in the relationship between the Impostor Phenomenon and these leadership competencies.

The findings of this study carry notable implications for both the understanding and enhancement of managerial and leadership dynamics. The identification of imposter phenomenon (IP), self-esteem, Managerial Decision-Making Self-Efficacy (MDMSE), and Innovative Work Behaviour (IWB) levels among managers and leaders contributes to a nuanced comprehension of the multifaceted factors influencing professional performance. The validation of measuring instruments for IP, self-esteem, MDMSE, and IWB within the South African context underscores the significance of tailored assessment tools in accurately gauging these constructs, fostering more precise research and practice. The discerned variations in IP, self-esteem, MDMSE, and IWB across demographic and contextual factors underscore the need for targeted interventions and support systems that cater to diverse managerial profiles. Moreover, the established mediation role of self-esteem unveils a crucial pathway to potentially mitigate the detrimental effects of the imposter phenomenon on decision-making and innovation. Overall, these findings not only enhance our comprehension of the intricate interplay between psychological factors and leadership capabilities but also pave the way for targeted strategies that can nurture more effective managerial practices in South Africa.

Within this study, the following were identified: The IP, self-esteem, MDMSE, and IWB levels of managers/leaders levels were identified. The IP's validity and reliability, self-esteem, decision-making self-efficacy, and IWB measuring instruments in the South African context were validated. Differences in the IP, self-esteem, MDMSE and IWB about age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors were identified. It was established that self-esteem mediates the relationship between the IP, MDMSE, and IWB. Lastly, there is a relationship between the IP and MDMSE and IWB of managers/leaders in South Africa. The results of this study have shown that the IP influences leadership skills and affects leaders' MDMSE and IWB. The results show that the influence of the IP is varied and complicated.

This study implied that the goal was to create a structured blueprint or outline that systematically examined the impact of the imposter phenomenon on critical leadership competencies. This framework consisted of interconnected elements, which were as follows:

Components of Imposter Phenomenon: This framework identified and defined the key components of the imposter phenomenon, including its psychological aspects, causes, manifestations, and emotional responses.

Critical Leadership Competencies: This framework outlined the specific leadership skills and qualities considered critical for effective leadership. These encompassed areas such as communication, decision-making, emotional intelligence, and adaptability.

Influence Pathways: This framework illustrated the potential pathways through which the imposter phenomenon could affect or interact with critical leadership competencies. This included an exploration of how self-doubt impacted decision-making, how feelings of inadequacy influenced communication, or how the fear of exposure affected strategic thinking.

Measurement and Assessment: This framework developed measurement tools and assessment methods to quantify the influence of the imposter phenomenon on leadership competencies. The development of the presented questionnaire holds immense value for leaders as it facilitates a structured assessment of their experiences. By establishing operational definitions and essential concepts, abstract notions transform into observable and measurable metrics, enabling the collection of valuable data. The integration of the Imposter Phenomenon (IP) and these pivotal concepts forms the basis for analysing and evaluating the impact of the IP on leaders within the context of South Africa. This study employs a quantitative cross-sectional questionnaire methodology to explore the interplay among the identified components. The questionnaires draw inspiration from established works by Ibrahim et al. (2020), Rosenberg (1965), Myburgh et al. (2015), and Ayoub et al. (2021), aligning with their validated approaches to enhance the credibility and reliability of the assessment.

Some practical uses for such an assessment tool include:

- *Leadership Development Programs:* Organisations can utilise the assessment tool to identify individuals who may be experiencing imposter feelings and struggling with their leadership competencies. This information can be integrated into leadership development programs to provide targeted support and resources to enhance self-confidence and performance.
- *Talent Management and Succession Planning:* The assessment tool can help in identifying potential leaders who might be hindered by the imposter phenomenon. By

addressing these challenges early on, organisations can mentor and prepare these individuals for leadership roles with more tailored training and mentorship.

- *Performance Appraisals:* Incorporating the assessment tool into performance evaluations can provide a deeper understanding of the factors influencing leadership performance. It can help differentiate between actual skill gaps and imposter-related challenges, leading to more accurate performance feedback and improvement strategies.
- *Coaching and Mentoring:* Managers and mentors can use the assessment results to tailor their coaching and mentoring approaches. They can offer guidance specifically aimed at addressing imposter feelings, thereby fostering healthier self-perception and increased leadership effectiveness.
- *Personal Development Plans:* Individuals can use the assessment tool for self-reflection and personal development. Recognising imposter feelings can motivate individuals to seek out resources, training, and experiences that build their confidence and competence as leaders.
- *Diversity and Inclusion Efforts:* The assessment tool can contribute to diversity and inclusion initiatives by highlighting potential barriers that individuals from underrepresented groups may face due to imposter feelings. This insight can inform strategies to provide targeted support and create more inclusive environments.
- *Research and Academic Studies:* Researchers can use the assessment tool to gather data on the prevalence and impact of the imposter phenomenon on leadership competencies across different contexts. This can lead to a deeper understanding of the phenomenon and the development of more effective interventions.
- *Career Counselling and Guidance:* Career counsellors can utilise the assessment tool to guide individuals in making informed decisions about their career paths. By addressing imposter feelings, counsellors can help individuals pursue roles that align with their abilities and aspirations.
- *Stress and Well-being Programs:* Organisations can integrate the assessment tool into well-being initiatives to identify individuals who may be experiencing significant stress due to imposter feelings. Tailored support can then be provided to promote mental health and resilience.
- *Long-term Organisational Performance:* Addressing the imposter phenomenon can contribute to improved leadership effectiveness, leading to better decision-making, team cohesion, and overall organisational performance.

In summary, the assessment tool developed within the framework provides valuable insights into the imposter phenomenon's impact on leadership competencies, enabling organisations and individuals to implement targeted strategies for growth, development, and enhanced performance.

Contextual Factors: This framework accounted for contextual factors that mediated the relationship between the imposter phenomenon and leadership competencies. These factors encompass organisational culture, leadership style, personal experiences, and external pressures.

Analytical Framework: This framework proposed an analytical framework to interpret the collected data and draw meaningful conclusions about how the imposter phenomenon impacted critical leadership competencies.

In conclusion, this study led to the creation of a comprehensive framework supported by a conceptual model that outlined the connections between the imposter phenomenon and critical leadership competencies. This model offered researchers and practitioners a theoretical foundation for understanding and addressing the psychological dynamics within the leadership context, thereby contributing to a more informed and nuanced approach to leadership development.

In this study, a comprehensive exploration of the imposter phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour has been meticulously undertaken. The multifaceted dimensions of the imposter phenomenon have been thoroughly elucidated, particularly in the context of managers and leaders operating within professional environments. The instruments used to measure the imposter phenomenon have also been critically examined, ensuring a comprehensive understanding of its assessment. Similarly, the dimensions of self-esteem, its resonance within managerial and leadership roles, and the tools utilised for its measurement have been carefully analysed.

Furthermore, the intricate aspects of decision-making self-efficacy have been expounded upon, highlighting its relevance within the decision-making process in managerial and leadership scenarios. The dimensions of decision-making self-efficacy have been intricately analysed, and the corresponding measurement instrument has been critically evaluated. Moreover, the dimensions of innovative work behaviour, its significance within managerial and leadership

contexts, and the measuring instruments adopted for its assessment have been meticulously discussed.

The study's practical applications and potential directions for future study are discussed in the next section.

6.10 RECOMMENDATIONS FOR FUTURE RESEARCH

“a puppet is free
As long as he loves his strings”
Sam Harris –

Numerous writers have examined the impact of motivational factors on innovation-related outcomes (Amabile, 1988; Odoardi *et al.*, 2010; Shalley, 1991). Since IWB is crucial for today's businesses, future work and organisational psychology research may encounter unique and complicated issues when studying individuals' proactive approaches to continuously improving their company. Shalley and Gilson (2004) suggested that a future study explore the dialogue of essential motivation to look at the impact of multiple relative forecasters on creativity because “this perspective has been reported in the literature frequently, but few studies have directly tested it, leading to inconclusive findings.

While the results of this study supported the outcomes of the research questions, the following recommendations for future research can be made: This research confirmed that the IP affects leadership skills, for example, MDMSE and IWB, but it did not explain the reasons for these differences. Further research in these areas is recommended.

- Does the Impostor Phenomenon affect different age groups, but do generational influences play a role?
- Does the Impostor Phenomenon have a different influence on individuals from the Baby Boomer generation compared to individuals from Generation Z or Millennials?
- The findings suggest that the private sector respondents reported a higher variation in all the research constructs than public sector respondents. Further research on the reasons for these differences is recommended for further studies.
- Further studies related to the influence of the IP on other leadership skills, for example, conflict management and leadership communication skills, could be conducted.
- This study established that the IP influences leadership competencies. This research did not establish reasons why this phenomenon affects certain areas. Additional research is recommended to investigate why the IP influences these areas explicitly.

6.11 CONCLUSION

This study has bridged a notable gap in existing research through its exploration of the relationship between the Impostor Phenomenon and critical leadership competencies, namely innovative work behaviour and decision-making self-efficacy, within the framework of South African leadership. The Impostor Phenomenon, characterised by enduring feelings of inadequacy and a persistent fear of exposure, has the potential to deeply impact a leader's self-esteem. Consequently, their capacity to make informed decisions and foster innovation could be compromised. The research acknowledges that leaders who perceive themselves as impostors might second-guess their decision-making capabilities, leading to caution, excessive analysis, and an aversion to risk-taking. Moreover, the fear of being unmasked as fraudulent could hinder leaders from pursuing innovative avenues, stifling creativity, and impeding the cultivation of innovative environments.

The study's framework admirably captures this intricate interplay, providing valuable insights into the mechanisms through which the Impostor Phenomenon might hinder leadership competencies. The research's distinctiveness lies in its empirical exploration of this relationship, enriching both theoretical comprehension and practical applications for leaders striving to enhance their decision-making self-efficacy and innovative work behaviour by addressing the challenges engendered by the Impostor Phenomenon.

To systematically address the dynamic interaction between the Impostor Phenomenon and essential leadership competencies, this research has developed a meticulously tailored questionnaire. This instrument proves instrumental in gauging the extent to which the Impostor Phenomenon impacts innovative work behaviour and decision-making self-efficacy among leaders. The pragmatic implications of this questionnaire are multifaceted. Notably, it furnishes leaders with a platform for introspection, enabling them to evaluate their susceptibility to the Impostor Phenomenon. This aids in recognising and addressing any latent feelings of inadequacy or self-doubt that could potentially impede their leadership effectiveness.

Furthermore, the questionnaire bestows organisations with the means to identify leaders who might be at risk of succumbing to the Impostor Phenomenon. Such identification facilitates the implementation of targeted interventions, including tailor-made leadership development initiatives or coaching, to bolster confidence and mitigate the deleterious effects of the Impostor Phenomenon. Additionally, its application fosters heightened self-awareness among leaders, fostering a proactive approach to managing the psychological dynamics intrinsic to leadership

roles. Overall, the creation of this questionnaire offers a pragmatic tool to catalyse personal growth, facilitate effective decision-making, and nurture innovative thinking among leaders. Ultimately, it contributes to the cultivation of resilient and proficient leadership within organisational contexts.

By delving into the nuanced impact of the Impostor Phenomenon, this study furnishes leaders with a comprehensive understanding of the characteristics engendered by this phenomenon, thereby enabling them to effectively manage its influence. This research is poised to contribute both theoretically and practically, offering tangible benefits for leaders. Armed with the insights and recommendations presented herein, leaders can more adeptly identify, analyse, and address the consequences of the Impostor Phenomenon on their decision-making self-efficacy and innovative work behaviour.

Does the Impostor Phenomenon affect leadership competencies, namely decision-making self-efficacy and innovative work behaviour? This study developed a framework for assessing the influence of the IP on critical leadership competencies and established that self-esteem acted as a mediator. This study combined theory and practice. In this study, the following hypotheses were confirmed.

- H1_a: The impostor phenomenon, self-esteem, decision-making self-efficacy, and innovative work behaviour measuring instruments are valid and reliable in South Africa.
- H2_a: There are differences in the impostor phenomenon of self-esteem, decision-making self-efficacy, and innovative work behaviour between age, highest qualification, managerial/leadership experience, managerial/leadership role, gender and sectors
- H3_a: Self-esteem mediates the relationship between the impostor phenomenon, decision-making self-efficacy, and innovative work behaviour.
- H4_a: The impostor phenomenon negatively influences decision-making self-efficacy and innovative work behaviour.

Thus, it can be confirmed that the IP affects leadership behaviour. With the results of this study confirmed, managers can identify, understand, manage, and control the impact of this phenomenon. By understanding the impact, this phenomenon may have on leadership behaviour; leaders can control their influence. However, leaders do not need to allow a phenomenon like IP to influence their ability to achieve their full potential for success.

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ANNEXURE A: WRITTEN CONSENT FROM AUTHORS

German-developed Impostor-Profile (IPP31)

Fabio Ibrahim, Johnn-Christoph Münscher and Phillipp Yorck Herzberg.

Mail | Properties | Message Source | Discussion Thread | 2022/02/07 10:12

Fabio Ibrahim <fabio.ibrahim@t-online.de>
Re: Permission to make use of questionnaire (APP31) ✓
To: Theresa Bowen
Cc: hertzberh@hsu-hh.de; j.muenscher@hsu-hh.de

Dear Ms. Bowen,

Thank you very much for your message.
Your question sounds very exciting, and we would like to support you with the survey.

The current Impostor-Profile 30 (IPP30) has 30 items and allows the calculation of a total score.
You can find the paper here:
<https://www.frontiersin.org/articles/10.3389/fpsyg.2021.720072/full>

I would also like to send you the evaluation instructions and items for the instrument with a visual analog scale and a 10-point Likert scale. You can find them in the attached PDF.

If you have any questions about the instrument, please feel free to contact me.
We are happy to support you in your exciting project.

Best regards from Hamburg!
Fabio

Rosenberg self-esteem scale (RSE)

Late, Dr. Morris Rosenberg

Mail | Properties | Message Source | Discussion Thread | 2022/02/07 15:53

"Sociology Department (SHARED)" <sociology@umd.edu>
Re: Permission to make use of questionnaire (RSE) ✓
To: Theresa Bowen

Dear Theresa,

The Scale is now in the public domain and you are welcome to use it in your research. We ask that you credit Dr. Morris Rosenberg, where appropriate.

Best of luck with your study.

Thank you,
Ashley Monroe
Administrative Assistant
Department of Sociology
University of Maryland
<https://soecy.umd.edu/>

Managerial Decision-making Self-Efficacy Questionnaire (MDMSEQ)

Prof Wim Myburgh

Mail | Properties | Message Source | Discussion Thread |

"Wim Myburgh" <wim@compueasy.net>
RE: Toestemming: Managerial Decision making Self-efficacy Questionnaire (MDMSEQ) ✓
To: Theresa Bowen
GroupWise has prevented images on this page from displaying. [Click here to display images](#)

2021/11/16 14:18

You are welcome to use the MDMSEQ.

"Exploring the mediating role of self-esteem in the relationship between the impostor phenomenon, leadership competencies, decision-making and innovative work **behaviour**" [spelling?]

Define your construct "self-esteem decision-making efficacy".

Some thoughts for construct clarity.

In colloquial terms, self-efficacy beliefs are frequently referred to as the self-confidence to perform a specific task at a certain level of competence. Although conceptually similar to self-efficacy beliefs, Bandura (1997) states that self-confidence (as a trait) is a nondescript term that refers to the strength of a belief but does not necessarily specify what the certainty is about. As a term, self-confidence is not a construct embedded in a theoretical system that specifies its determinants, mediating processes, and multiple effects.

Another surrogate term for self-efficacy beliefs is **self-esteem**. Self-esteem usually is considered to be a **global affective trait** that reflects an individual's characteristic affective evaluation of the self (e.g., feelings of self-worth or self-liking) **across a wide variety of situations** (Chen, Gully, & Eden, 2004; Judge, Erez, Bono, & Thoresen, 2002; Judge, Locke, & Durham, 1997).

- self-esteem reflects a person's **overall subjective emotional evaluation of his or her own worth**. It is a judgment of oneself as well as an attitude toward the self.
- self-efficacy on the contrary, is one's **belief in one's ability to succeed in specific situations or accomplish a task**. One's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges.

Research suggests that general self-efficacy is more highly related to **motivational variables** than is **self-esteem**, whereas self-esteem is more highly related to **affective variables**.

You should make the theoretical distinction between self-efficacy and self-esteem since failure to distinguish between them might exact a price in terms of precision, validity, and understanding of determinants of your outcome constructs (leadership competencies, decision-making and innovative work behaviour).

In my study I used **self-efficacy beliefs** as a proximal and contextually situated individual factor that influences managers' interpretative biases that reflect estimates about how effort and ability will combine and the **type of affect** a manager will experience in **response decision demands**. Managerial decision making is presented as inherently conditional on the independent and interactive influence of self-efficacy beliefs (via its regulation of effort and affect) in the application of individual capabilities, concomitant decision-generated affect and fatigue to account for managerial decision processes and outcomes.

The instrument is consequently, a **NARROW** context-specific managerial decision making measure based on self-efficacy and NOT self-esteem. I will question its value for generic leadership competencies and innovative work behaviour. I would expect it may show common variance with the "impostor syndrome" as an affective construct.

I see arguments appear to suggest that we have to see the impostor phenomenon as not merely a dysfunctional "syndrome" that resides within certain individuals, but instead as a psychological response to a dysfunctional context [examine the role of individuals' social context in shaping their impostor feelings]. Practical implications are - to lead to systemic change, which will create an environment in which everyone feels as though they rightly belong.

Kind Regards
Dr Wim Myburgh

 Industrial Psychologist (PS 0015673)
Pringle Bay, Western Cape, South Africa
Mobile +27 (0) 83 679 6883

Innovative Work Behaviour Questionnaire:

Prof. ALaaeldin Abdelhamed Ayoub

FW: Permission to make use of questionnaire - Message (HTML)

File Message Insert Options Format Text Review Help Tell me what you want to do

Clipboard Basic Text Names Include Adobe Acrobat Tags Voice Sensitivity Editor Immersive Insert files using Drive Add a meeting View Templates

From: ALaaeldin Abdelhamed Ayoub <alaaeldinaa@agu.edu.bh>
To: Theresa Bowen <Theresa.Bowen@nwu.ac.za>
Subject: RE: Permission to make use of questionnaire

Send as Adobe Document Cloud link

From: ALaaeldin Abdelhamed Ayoub <alaaeldinaa@agu.edu.bh>
Sent: Monday, 08 May 2023 12:09
To: Theresa Bowen <Theresa.Bowen@nwu.ac.za>
Subject: RE: Permission to make use of questionnaire

Dear Theresa,

Hope this email finds you well. It is with great pleasure that I approve of your use of the scale. Please don't hesitate to contact me if I can be of any help.

Kind regards,
Ayoub

Prof. ALaaeldin Abdelhamed Ayoub
Vice Dean for Educational Studies
Chairperson of Distant Teaching & Training Department
alaaeldinaa@agu.edu.bh
Arabian Gulf University
Tel: +973 17 239 771
P.O Box 26671

ANNEXURE B: LETTER OF CONSENT TO PARTICIPATE IN THIS STUDY



NWU Business School
North-West University
Private Bag x6001
Potchefstroom, 2520
<http://commerce.nwu.ac.za/business-school>

Letter of consent

Dear Participant

This survey is part of an empirical research study for a doctorate degree in Business Administration at the North-West University (NWU), titled: *Developing a framework for assessing the influence of the impostor phenomenon on critical leadership competencies: The mediation role of self-esteem*. The purpose of the questionnaire is to investigate the impact of the imposter phenomenon on innovative work behaviour and decision-making leadership competencies.

By completing and submitting this questionnaire, the respondent consents to participate in the study with the following understanding: That the purpose of the questionnaire is explicit. They understand that their participation in the questionnaire is voluntary, their anonymity is ensured, and the feedback of their responses obtained through the questionnaire will be reported as a collective; therefore, they will not be identified by name in the study.

The respondents acknowledge that they have the right to withdraw from the study at any given time. The information they will provide will only be used for the research study. That they will answer each question honestly based on their qualification(s), personal expertise, experience, and views, they understand that this project has been reviewed by, and received ethics clearance through, EMS-REC (Ethics Committee) and that this research will be reported and published. The respondents understand they reserve the right to raise a concern or make a complaint.

They also provide the following consent process personal information:

Respondents consent to the use of their personal information contained within this questionnaire and confirm that the information is supplied voluntarily, without undue influence from any party, and not under any duress. They also acknowledge that they ARE aware that they have the following rights regarding personal information collected.

They have the right to access the information at any reasonable time to rectify the information; object to processing the information, in which case this agreement will terminate; access the information at any reasonable time to rectify the information.



Important notices, terms, and conditions: The study is part of a post-graduate qualification and is conducted by the North-West University. This survey is voluntary, and respondents are not obligated to complete it. There will be no negative consequences if they do not complete the survey. Any information that they provide will remain confidential. Any personal identifying information (for example, demographics) is handled according to the rules formulated in the Protection of Personal Information Act (Act 4 of 2013).

The following is essential to note in line with the Act: Respondents are also under no obligation to complete personal information (i.e. demographics). They will have no negative consequences if they decide not to provide personal information (i.e. demographics). Respondents can request access to their details to change the information.

When collected, the booklets and data will be securely stored for five years at the university. Only the student and her supervisor will have access to the data, and it will not cross the borders of South Africa. Results will only be used and presented in an anonymised format from the total sample. Therefore, the results of this study will not be presented or released at any time.

By completing this survey, respondents agree that their information can be used for research purposes, specifically for potential academic publications and conferences. There are no correct or incorrect answers to any questions in this questionnaire. This study has been approved by the Economic and Management Sciences Research Ethics Committee (EMS-REC), which reserves the right to audit this study to ensure compliance.

By completing this questionnaire, respondents consent to use their personal information and confirm that the information is supplied voluntarily, without undue influence from any party, and not under duress. That they acknowledge that they are aware that they have the following rights regarding personal information, which is collected, they have the right to: Access the information at any reasonable time to rectify the information, object to the processing of the information, in which case this agreement will terminate, and complain to the Information Regulator.



Should the respondent have any questions, comments, or queries about this questionnaire, they are more than welcome to contact the researcher at: Theresa.Bowen@nwu.ac.za.

Thank you in advance for your participation in this study. It is much appreciated!

Warm regards

Theresa Bowen (researcher)

Supervisor: Prof PA Botha (Petrus.Botha@nwu.ac.za)

ANNEXURE C: RESEARCH QUESTIONNAIRE

Coding PhD study questionnaire

Dear Participant

You have been selected to voluntarily participate in the study based on your leadership / managerial position, expertise (qualification(s), work, and experience). This survey is part of an empirical research study for a PhD in Business Administration at the North-West University (NWU), titled: Developing a framework for assessing the influence of the impostor phenomenon on critical leadership competencies: The mediating role of self-esteem. The purpose of the questionnaire is to investigate the impact of the impostor phenomenon on innovative work behaviour and leadership decision-making competencies.

Your participation in completing the questionnaire will significantly contribute to the study results.

Please note that the questionnaire comprises five sections:

Section A: Biographical information

Section B: Questionnaire on the impostor phenomenon

Section C: Questionnaire on self-esteem

Section D: Questionnaire on leadership decision-making

Section E: Questionnaire on innovative work behaviour

Completing the questionnaire should not take more than 30 to 45 minutes of your time. Please ensure that you have completed all the sections. Should you have any questions, comments, or queries about this survey, you are welcome to contact me at: Theresa.Bowen@nwu.ac.za or my research promoter Prof PA Botha (Petrus.Botha@nwu.ac.za).

Thank you in advance for your participation in this study. It is much appreciated!

Warm regards
Theresa Bowen (researcher)

January 2023

* Required

When participating in this study, respondents consent to the terms as stated in this document: https://drive.google.com/file/d/1f17mRS5vdmPDBEidG1DdaaRXmfQPbChI/view?usp=share_link

By selecting "Yes", I agree to voluntarily participate in this study:

- Yes
- No

Section A: Biographical information

*For the use of profiling, the sample set. **Statistical purposes only

Please complete the following information:

1. Gender: *

Male	1
Female	2
Other	3

2. Age group

0-29	1
30-39	2
40-49	3
50-59	4
60 and over	5

3. Highest qualification completed: *

NQF Level 5 (Higher Certificate)	1
NQF Level 6 (National Diploma or an advanced certificate)	2
NQF Level 7 (Bachelors degree or advanced diploma)	3
NQF Level 8 (Honours degree)	4
NQF Level 9 (Masters degree)	5
NQF Level 10 (Doctorate degree)	6

4. Years of managerial/leadership experience:

1–5 years	1
6–10 years	2
11–15 years	3
16–20 years	4
21–25 years	5
26–30 years	6
30 years and more	7

5. Indicate your leadership/managerial role: *

Supervisory role	1
Middle management role	2
Senior management role	3

6. Are you currently employed in the private or the public sector?

Private sector	1
Public sector	2

7. In which sector/industry are you currently employed?

Private sector	1
Public sector	2
Commerce	3
Construction	4
Education	5
Financial services; professional services	6
Food; drink; tobacco	7
Forestry; wood; pulp and paper	8
Health services	9
Hotels; tourism; catering	10
Mining (coal; other mining)	11
Mechanical and electrical engineering	12
Media; culture; graphical	13
Oil and gas production; oil refining	14
Postal and telecommunications services	15
Public service	16
Shipping; ports; fisheries; inland waterways	17
Textiles; clothing; leather; footwear	18
Transport (including civil aviation; railways; road transport)	19
Transport equipment manufacturing	20
Utilities (water; gas; electricity)	21
Other:	22

Section B: The impostor phenomenon

The impostor phenomenon describes a psychological experience of intellectual and professional fraudulence. Individuals experiencing impostorism believe others have inflated perceptions of their abilities and fear being evaluated. Therefore, they fear exposure as frauds with a perceived inability to replicate their success. This fear exists despite evidence of on-going success. Such individuals also discount praise, are highly self-critical and attribute their achievements to external factors such as luck, hard work or interpersonal assets, rather than internal qualities such as ability, intelligence or skills.

This instrument measures the individual expression of the Impostor Phenomenon with a total score and six subscales. Answer the statements by indicating how much they apply to you personally. To do this, place a cross on the line below the statement. A cross on the far right indicates that the statement applies completely to you—a cross on the far left means that the statement does not apply to you in any aspect. Use the entire line to differentiate your assessment. Try not to take too long to answer. There are no right or wrong statements.

Rate your answer according to the scale (1 Not like me at all to 100 Very much like me)

1- Not like me at all	1
10	2
20	3
30	4
40	5

50	6
60	7
70	8
80	9
90	10
100 - <i>Very much like me</i>	11

Items	Factor
1. Despite former successes, I have a strong fear of failure.	Competence doubt
2. I make many things more difficult for myself by putting off my work.	Working Style
3. I often overestimate my skills.	Other-Self Divergence
4. I often think that my skills are not enough.	Competence doubt
5. Examination situations are very stressful for me.	Competence doubt
6. I often postpone starting important tasks.	Working Style
7. My colleagues' expectations of me are too high.	Other-Self Divergence
8. For me, it is very important to create something significant.	Ambition
9. For me, it is important to appear sympathetic.	Need for Sympathy
11. I start my tasks earlier than others do. (Inverting or reversed scored)	Working Style
12. It is important for me to be liked.	Need for Sympathy
13. I am not convinced of my capabilities.	Competence doubt
14. A failure is no reason for me to doubt my abilities. (Inverting or reversed scored)	Competence doubt
15. A job in which I have many subordinates will satisfy me.	Ambition
16. I am considered a very helpful person.	Need for Sympathy
17. I usually finish important tasks at the last moment.	Working Style
18. Mostly, I am dissatisfied with the quality of my work.	Competence doubt
19. Achieving something significant is what matters most to me in life.	Ambition
20. Individuals overestimate me.	Other-Self Divergence
21. When others achieve very good results, it makes me feel emotional.	Competence doubt
22. Often I behave authentic.	Alienation
23. I'm afraid to fail, even though I am mostly successful.	Competence doubt
24. I often distract myself, even though I have a lot to do.	Working Style
25. I often feel like I am holding back my true personality.	Alienation
26. When I am successful, I often have the feeling that failure will follow.	Competence doubt
27. I am often thought to be smarter than I am.	Other-Self Divergence
28. I am rarely my real self.	Alienation
29. I usually do the most important tasks first. (Inverting or reversed scored)	Working Style
30. High expectations of me by others stress me	Competence doubt

Section C: Questionnaire on self-esteem

Self-esteem is how we value and perceive ourselves. It is based on our opinions and beliefs about ourselves, which can feel difficult to change.

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

Rate your answer according to the scale 1-4 given below:

1: Strongly agree.	1
2: Agree.	2
3: Disagree.	3
4: Strongly disagree.	4

Rosenberg Self-Esteem Scale (RSE)

Author: Morris Rosenberg

The purpose of the 10 item RSE scale is to measure self-esteem. Originally the measure was designed to measure the self-esteem of high school students. However, since its development, the scale has been used with a variety of groups including adults, with norms available for many of those groups.

Scoring: As the RSE is a Guttman scale, scoring can be a little complicated. Scoring involves a method of combined ratings. Low self-esteem responses are “disagree” or “strongly disagree” on items 1, 3, 4, 7, 10, and “strongly agree” or “agree” on items 2, 5, 6, 8, 9. Two or three out of three correct responses to items 3, 7, and 9 are scored as one item. One or two out of two correct responses for items 4 and 5 are considered as a single item; items 1, 8, and 10 are scored as individual items; and combined correct responses (one or two out of two) to items 2 and 6 are considered to be a single item.

The scale can also be scored by totalling the individual 4 point items after reverse-scoring the negatively worded items.

Reliability: The RSE demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

Validity: Demonstrates concurrent, predictive and construct validity using known groups. The RSE correlates significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory. In addition, the RSE correlates in the predicted direction with measures of depression and anxiety.

Reference:

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Revised date (4 October 2006)

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RSE

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree

2 = Agree

3 = Disagree

4 = Strongly disagree

Items
1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all. (Reverse-scored)
3. I feel that I have a number of good qualities
4. I am able to do things as well as most other individuals.
5. I feel I do not have much to be proud of. (Reverse-scored)
6. I certainly feel useless at times. (Reverse-scored)
7. I feel that I am a person of worth.
8. I wish I could have more respect for myself. (Reverse-scored)
9. All in all, I am inclined to feel that I am a failure. (Reverse-scored)
10. I take a positive attitude toward myself

Section D: Questionnaire on leadership decision-making (MDMSEQ)

Decision-making self-efficacy is the self-confidence or belief in one's ability to make decisions, including participating in shared decision-making. This inventory aims to assess how well you use your decision skills. The way one approaches complex decision tasks may be affected by beliefs in one's competence that may be self-enhancing or self-impeding. In decision-making, you use analytical abilities and skills to derive effective solutions, and this requires you to diagnose the situation, decide when a decision must be made, search for solutions, evaluate their consequences and select an alternative.

In addition, because you implement solutions within a social environment, you need to apply a variety of social influence tactics that promote solution implementation. This requires you to persuade and convince others to implement your solutions and actions.

In the sections that follow you are required to respond to questions about your decision-making abilities.

Several situations described below are things that can make it hard to make decisions.

Please rate in each of the blanks in the column, how certain you are that you can get yourself to perform these activities regularly.

Rate your degree of confidence by using the scale given below:

0-9 (Cannot do at all)	1
	2
	3
	4
	5
50-(Moderately / certain can do)	6
	7
	8
	9
90-100 (Certain can do)	10

Factors:

- Thought and affect control 12 items
- Exploratory search and processing efficacy 8 items
- Analytical and inferential efficacy 4 items
- Social influence efficacy 6 items

Items	Factors
1. Think clearly and keep all the relevant factors and information in mind	Thought and affect control
2. Control my level of attention and concentration when time pressure mounts	Thought and affect control
3. Limit negative thoughts entering my mind	Thought and affect control
4. Refrain from worry about my decision choices and consequences	Thought and affect control
5. Contain my self-doubt about my ability to deal with adverse consequences	Thought and affect control
6. Remain confident to make sound judgements and the right choices	Thought and affect control
7. Know what to do next in decision-making *	Thought and affect control
8. Feel that I am making the right decisions *	Thought and affect control
9. Make difficult decisions under time pressure *	Thought and affect control
10. Use a methodical thinking process in my decisions.	Analytical and inferential efficacy
11. Analyse and interpret numerical / quantitative data accurately	Analytical and inferential efficacy
12. Discover a range of alternatives/several solutions	Exploratory search and processing efficacy
13. Weigh negative and positive consequences of each alternative option	Exploratory search and processing efficacy
14. Refrain from changing my mind to the least objectionable alternative	Analytical and inferential efficacy
15. Trust my own judgement and express my opinions firmly	Thought and affect control
16. Influence decisions with certainty that they will work	Thought and affect control
17. Readily commit to my decisions	Thought and affect control
18. Appraise a business decision problem situation quickly	Exploratory search and processing efficacy
19. Search for new information and alternatives	Exploratory search and processing efficacy
20. Obtain information by seeing what needs to be known	Exploratory search and processing efficacy
21. Narrow down list of alternatives that appear as effective options	Exploratory search and processing efficacy
22. Manipulate quantitative data to identify trends, problems, and their causes	Analytical and inferential efficacy
23. Choose the best alternatives given the situation	Exploratory search and processing efficacy
24. Persevere in my persuasive attempts to convince others of my decision choice	Social influence efficacy
25. Make decisions that contain risks and potentially unfavourable consequences	Social influence efficacy
26. Make decisions and persevere with actions to make them pay off	Social influence efficacy
27. Secure resources to implement my decisions	Exploratory search and processing efficacy

Items	Factors
28. Convince others of my decision choice even when opposition mounts	Social influence efficacy
29. Influence decisions regardless of the amount of control I have over organisational constraints	Social influence efficacy
30. Refrain from putting off difficult decisions	Social influence efficacy

Section E: Questionnaire on innovative work behaviour

Employees' innovative work behaviour (IWB) is defined as the development, adoption and implementation of new ideas for products, technologies and work methods by employees.

For each question, please indicate the number that best indicates how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

Rate your answer according to the scale 1-5 given below:

1: Strongly disagree.	1
2: Disagree.	2
3: Neither agree nor disagree	3
4: Agree	4
5: Strongly agree.	5

Items	Factors
1 I am able to develop ideas and solutions for creative opportunities in my field.	Opportunity exploration
2 I share ideas with my colleagues or supervisors about opportunities for the development of working methods within the organization.	Opportunity exploration
3 I share ideas with my colleagues or supervisors about the opportunities to find solutions to the problems we face at work.	Opportunity exploration
4 I discuss with my colleagues or supervisors the possible opportunities to change work patterns to achieve better results.	Opportunity exploration
5 I propose new ideas for development within the organization.	Idea generation
6 I am able to express personal opinions about basic problems in the workplace.	Idea generation
7 I discuss personal ideas for work improvement with colleagues.	Idea generation
8 I share ideas about concrete changes at work with colleagues.	Idea generation
9 I suggest improvements to ideas expressed by colleagues or bosses at work.	Idea generation
10 I am able to convince others of the importance of an improved idea or a new solution.	Idea Promotion
11 I propose the new idea to key people authorized to allocate resources to this new idea.	Idea Promotion
12 I promote supervisors' new ideas.	Idea Promotion
13 I promote colleagues' new ideas.	Idea Promotion

14 I introduce to colleagues to use an idea or a new solution.	Idea Promotion
15 I illustrate how the new idea can be applied gradually and practically to others.	Idea Promotion
16 Testing solutions for unexpected problems that arise when ideas are put into practice.	Idea realization
17 Analysing solutions arising from unwanted effects, when putting ideas in practice.	Idea realization
18 Monitoring progress during the process of putting ideas into practice.	Idea realization
19 Identifying the criteria for success to achieve or to realize the new idea.	Idea realization
20 Keeping colleagues informed about progress in achieving the idea.	Idea realization
21 Critical thinking about the procedures that are followed when putting the idea into practice.	Idea realization
22 Designing practical (operational) strategies for similar future situations.	Idea realization
23 Comparing the results of the proposed ideas with the original predetermined goals.	Idea Sustainability
24 Engaging with colleagues to further develop the idea.	Idea Sustainability
25 Initiating collaboration with other groups in the organization to apply the new idea in other contexts as well.	Idea Sustainability
26 Discussing with colleagues how to consolidate ideas that have been implemented more strongly in the organization's system.	Idea Sustainability
27 Awareness of the steps that can be taken to make the implementation of the proposed idea a success.	Idea Sustainability

ANNEXURE D: GATE KEEPER APPROVAL



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: +2718 299-1111/2222

Web: <http://www.nwu.ac.za>

Research Data Gatekeeper Committee

NWU RDGC PERMISSION GRANTED / DENIED LETTER

Based on the documentation provided by the researcher specified below, on 16/09/2022 the North-West University (NWU) Research Data Gatekeeper Committee (NWU-RDGC) hereby grants permission for the specific project (as indicated below) to be conducted at the NWU:

<u>Project title:</u> Developing a framework for assessing the influence of the imposter phenomenon on critical leadership competencies: Mediation role of self-esteem. <u>Project leader:</u> Prof P.A. Botha <u>Researcher/Project Team:</u> T. Bowen <u>Ethics reference no:</u> NWU-00670-22-A4 <u>NWU RDGC reference no:</u> NWU-GK-22-055 <u>Specific Conditions:</u> • The Researcher may communicate with the individual executive management from faculties and support department to distribute their invitation to the senior leadership/management team inviting them to participate in the study. • No personal data such as contact details of prospective participants may be provided or used by the researcher without the consent of the prospective participants. <u>Approval date:</u> 16/09/2022 <u>Expiry date:</u> 15/09/2023

General Conditions of Approval:

- The NWU-RDGC will not take the responsibility to recruit research participants or to gather data on behalf of the researcher. This committee can therefore not guarantee the participation of our relevant stakeholders.
- Any changes to the research protocol within the permission period (for a maximum of 1 year) must be communicated to the NWU-RDGC. Failure to do so will lead to withdrawal of the permission.
- The NWU-RDGC should be provided with a report or document in which the results of said project are disseminated.

- Due to the COVID-19 pandemics the Committee would like to advise the researcher to practice the necessary caution and adhere to the National Covid-19 Guidelines when conducting research with participants.

Please note that under no circumstances will any personal information of possible research subjects be provided to the researcher by the NWU RDGC. The NWU complies with the Promotion of Access to Information Act 2 of 2000 (PAIA) as well as the Protection of Personal Information Act 4 of 2013 (POPI). For an application to access such information please contact Ms Annamarie De Kock (018 285 2771) for the relevant enquiry form or more information on how the NWU complies with PAIA and POPI.

The NWU RDGC would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the NWU RDGC for any further enquiries or requests for assistance.

Yours sincerely



Prof Jeffrey Mphahlele

Chairperson NWU Research Data Gatekeeper Committee

Original details: (22351930) C:\Users\22351930\Desktop\test 2.docm
13 November 2018

Current details: (22351930) M:\DSS\18533\Monitoring and Reporting Cluster\Ethics\Applications RDGC\Updated RDGC Permission Letter.docm
15 November 2018

File reference: 1.1.4.3

ANNEXURE E: ETHICAL APPROVAL



Private Bag X1290, Potchefstroom
South Africa 2520

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Fax: 018 299-4910
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Senate Committee for Research Ethics
Tel: 018 299-4849
Email: nkosinathi.machine@nwu.ac.za

28 June 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on 27/05/2022, Round Robin, the Economic and Management Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-RERC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Developing a framework for assessing the influence of the imposter phenomenon on critical leadership competencies: Mediation role of self-esteem																																
Study Leader/Supervisor (Principal Investigator)/Researcher: Prof PA Botha – PhD in Business Administration																																
Student: Bowen, T (21631123)																																
Ethics number:	<table border="1"><tr><td>N</td><td>W</td><td>U</td><td>-</td><td>0</td><td>0</td><td>6</td><td>7</td><td>0</td><td>-</td><td>2</td><td>2</td><td>-</td><td>A</td><td>4</td></tr><tr><td colspan="3">Institution</td><td></td><td colspan="3">Study Number</td><td></td><td colspan="3">Year</td><td colspan="3">Status</td></tr></table>			N	W	U	-	0	0	6	7	0	-	2	2	-	A	4	Institution				Study Number				Year			Status		
N	W	U	-	0	0	6	7	0	-	2	2	-	A	4																		
Institution				Study Number				Year			Status																					
Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation																																
Application Type:	Risk: <table border="1"><tr><td>Low</td></tr></table>			Low																												
Low																																
Commencement date: 28/06/2022																																
Expiry date: 28/06/2023																																
Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.																																

Special in process conditions of the research for approval (if applicable):

•

General conditions:
While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:
• The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the EMS-REC: - annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and - without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study. • The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EMS-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited. • Annually a number of studies may be randomly selected for an external audit. • The date of approval indicates the first date that the study may be started.
<i>n the interest of ethical responsibility, the NWU-SCRE and EMS-REC reserves the right to:</i>

- request access to any information or data at any time during the course or after completion of the study;
- to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;
- withdraw or postpone approval if:
 - any unethical principles or practices of the study are revealed or suspected;
 - it becomes apparent that any relevant information was withheld from the EMS-REC or that information has been false or misrepresented;
 - submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or
 - new institutional rules, national legislation or international conventions deem it necessary.
- Please note that the ethics approval of this application is subject to the Covid-19 protocols.

The EMS-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EMS-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely,

**Mark
Rathbone**

Digitally signed by Mark Rathbone
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Prof Mark Rathbone
Chairperson: NWU Economic and Management Sciences Research Ethics Committee

ANNEXURE F: DECLARATION OF PROFESSIONAL EDITING



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30 May 2023

Declaration of editing

Developing a model for assessing the influence of the Impostor Phenomenon on critical leadership competencies

Theresa Bowen

I declare that I have edited and proofread this thesis. My involvement was restricted to language usage and spelling, completeness and consistency and referencing style. I did no structural re-writing of the content.

I am qualified to have done such editing, being in possession of a Bachelor's degree with a major in English, having taught English to matriculation, and having a Certificate in Copy Editing from the University of Cape Town. I have edited more than 400 Masters and Doctoral theses, as well as articles, books and reports.

As the copy editor, I am not responsible for detecting, or removing, passages in the document that closely resemble other texts and could thus be viewed as plagiarism. I am not accountable for any changes made to this document by the author or any other party subsequent to the date of this declaration.

Sincerely,

Dr J Baumgardt

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University of Cape Town: Certificate in Copy Editing

University of Cape Town: Certificate in Corporate Coaching



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