Exploring the influence of individual accountability on employee motivation in a Selected South African steel organisation: The mediator role of self-efficacy

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DECLARATION

I, **Firdaus Raoof**, declare that this mini-dissertation titled “Exploring the Influence of Individual Accountability on Employee Motivation in a Selected South African Steel Organisation: The Mediator Role of Self-efficacy” is my own work. Any sources used have been referenced per the North-West University Business School’s requirements. This study has been language edited (refer to Annexure D). This research has also not been submitted to any other academic institute.

26 November 2024

DEDICATION

This study is dedicated to my maternal grandparents, Rabia Bibi Rashid and Mahomed Rashid, for teaching me the value of education and supporting me through the different learning phases of my life. It is also dedicated to my mother, Fazila Banoo Raoof, for proving to me how hard work, integrity, dedication, and patience allow one to rise above the circumstances to build a better life.

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ABSTRACT

Organisations view accountability as essential for achieving and maintaining high organisational and employee performance levels. While historically, accountability research has focused on the macro-perspective of accountability, current research focuses on the individual-perspective of accountability, known as individual accountability. This approach allows researchers and organisations to gain insight into the impact of individual accountability on employee behaviours and outcomes. This study explores the influence of individual accountability on employee motivation using the mid-to-senior management levels of a selected South African steel organisation. The effect of self-efficacy as a mediator in this relationship is also studied. Findings indicate no statistically significant direct relationship exists between individual accountability and employee motivation. However, a positive statistically significant relationship exists between these variables when self-efficacy is included as a mediator variable. This suggests the presence of indirect-only mediation.

These findings have several managerial implications. First, formal accountability mechanisms such as disciplinary procedures may have a limited impact on employee motivation to achieve organisational outcomes and expectations within the mid-to-senior management levels of the chosen steel organisation. Second, personnel within the sample population may perceive current leadership behaviours as not supporting and encouraging their workplace autonomy. Lastly, considering the statistically positive impact of self-efficacy in the link between individual accountability and employee motivation, managers within the steel organisation must also focus on developing and maintaining the level of self-efficacy of employees.

Based on this study's findings, recommendations have been provided for future research. Suggestions include investigating whether how an organisation and its managers apply accountability mechanisms influences the individual accountability of employees and outcomes like motivation. Furthermore, since this study has been conducted through purposive sampling, additional research is required to determine if the findings of this study extend to employees outside the sample population of the selected steel organisation and to the mid-to-senior management levels within other types of South African companies.

Key terms: individual accountability, employee motivation, self-efficacy, mediator, steel organisation.

LIST OF ABBREVIATIONS

CHRO	Chief Human Resources Officer
CWBs	Counterproductive workplace behaviours
HR	Human resources
HRM	Human resource management
IAOS	Individual Accountability in Organizations Scale
MS Excel	Microsoft Excel
MWMS	Multi-dimensional Work Motivation Scale
NDA	Non-disclosure agreement
NGSE	New General Self-efficacy Scale
NWU	North-West University
NWU-IR	North-West University’s Institutional Repository
REC	Research Ethics Review Committee
SDT	Self-determination theory

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CHAPTER 1 INTRODUCTION TO THE STUDY

1.1. Introduction

The current business environment, which is uncertain, complex, and rapidly changing, requires organisations to implement various strategies to remain competitive. Motivation refers to the conscious and unconscious feelings and effort employees have to take action to achieve specific organisational goals (Riyanto *et al*., 2021:163). As organisational success is dependent on the performance of each employee, individual characteristics such as motivation can influence overall organisational performance (Risakotta & Akbar, 2018:258-259).

Another technique that organisations can employ to achieve goals is accountability. Accountability forms part of organisations' human resource management (HRM) strategy (Kuo *et al*., 2022:1808) and includes formal practices and processes such as disciplinary procedures. To predict the impact of these strategies on individual outcomes and characteristics such as motivation, it is necessary to understand the individual employee's perception of accountability (Han & Perry, 2020a:288) and the influence of mediating and moderating variables on these relationships (Hall & Ferris, 2011:142).

1.2. Background

Accountability is considered beneficial to both employers and employees, as it outlines the expectations of roles, joint obligations, and performance (Wikhamn & Hall, 2014:458). Despite this, accountability remains a complex problem, as the reason that employees consider themselves to be accountable for their behaviours and actions remains unknown (Han & Perry, 2020a:288). Thus, further research is required to gain in-depth understanding into individual accountability (Hall *et al*., 2017:204) and its impact on individual characteristics and behaviours such as motivation.

Employees are considered to be motivated to achieve organisational outcomes under conditions that allow their own needs, aspirations and goals to be achieved (De Sousa Sabbagha *et al*., 2018:136). While employees may be more motivated to achieve organisational targets when they believe that they are accountable for these outcomes (Mero *et al*., 2014:1632), organisations need to apply individual accountability appropriately to realise its benefits (Li *et al*., 2022:9).

To achieve this balance, a greater understanding of the link between individual accountability, employee motivation, and mediating and moderating variables is required. To address this research gap, this study hypothesises that between individual accountability and employee motivation there exists a statistically significant and positive relationship. In addition, the impact of self-efficacy on mediating the relationship between these variables is explored.

1.3. Rationale of the study

Accountability research is in its early stages (Hall *et al*., 2017:204). Although current research generally focuses on the macro-perspectives of accountability, understanding individual accountability is essential to predict its influence on individual employee outcomes (Han & Perry, 2020a:288).

As individual accountability impacts the behaviour of employees at every level in the organisation, it is necessary to understand the organisational outcomes that this construct directly and indirectly influences. Therefore, additional research should also consider the moderating and mediating variables that influence the link between individual accountability and organisational outcomes (Hall & Ferris, 2011:144).

The rationale of this study is to address this gap in research by establishing if there is a relationship between individual accountability and employee motivation in a selected South African steel organisation. Furthermore, this study investigates the influence of self-efficacy as a mediator in this relationship.

1.4. Problem statement of the study

Accountability is crucial for organisations to achieve their performance targets (Pearson & Sutherland, 2017:437). A lack of accountability can result in several negative outcomes for both individuals and organisations, such as low employee morale and quality of work, increased counterproductive workplace behaviours (CWBs), decreased willingness to engage in workplace collaboration and communication, and increased levels of work-related anxiety, frustration, and job disengagement (KPMG, 2023:3; Ruppel *et al*., 2022:1). To encourage employee accountability, organisations create systems such as disciplinary procedures, formal reporting systems, and employee contracts (Han & Perry, 2020a:288). Although current research has concentrated on individual accountability in the workplace, the reason employees feel accountable for their behaviours and actions is not yet understood (Hall *et al*., 2017:219).

To develop a deeper understanding of individual accountability, exploring its relationship with other variables that influence individual-level employee behaviours, such as motivation, is essential. Employee motivation is considered to be the direction, intensity, and persistence of effort by individuals toward achieving organisational goals (Robbins & Judge, 2023:237). Research has found that employee motivation impacts organisational outcomes such as talent retention (De Sousa Sabbagha *et al*., 2018:136) and co-creation value (Waseem *et al*., 2021:442).

Furthermore, several studies have explored the impact of mediators, such as organisational citizen behaviour and workplace reputation (Hall *et al.*, 2009:387-388), on accountability relationships. However, research on the mediating variables that affect the relationship of individual accountability with organisational outcomes remains limited (Hall & Ferris, 2011:144).

The problem addressed in this study is the lack of understanding of the influence of individual accountability on employee motivation and the impact of employee self-efficacy as a mediator of this relationship. Despite the importance of accountability in achieving organisational outcomes, research has not fully explored how individual accountability influences employee motivation. Therefore, this study aims to address this gap in the literature by investigating the influence of individual accountability on employee motivation and the mediating role of self-efficacy in this relationship.

1.5. The research objectives, questions and hypotheses of the study

This study investigated the influence of individual accountability on employee motivation using a selected South African steel organisation. Additionally, the impact of employee self-efficacy as a mediator in this relationship was explored. Therefore, the research objectives of this study were the following:

1. To investigate if there is a link between individual accountability and employee motivation.
2. To explore if self-efficacy is a mediator variable in the connection between individual accountability and employee motivation.

Using the research objectives, the research questions of this study were as follows:

1. Does a positive statistically significant relationship exist between individual accountability and employee motivation?
2. Is self-efficacy a mediator in the relationship between individual accountability and employee motivation?

To address the research questions of this study, the following null and alternative hypotheses were formulated:

Null Hypothesis ($H_{0,1}$): No significant statistical relationship exists between individual accountability and employee motivation levels.
Alternative Hypothesis (H_1): A significant statistical relationship exists between individual accountability and employee motivation levels.
Null Hypothesis ($H_{0,2}$): Self-efficacy does not mediate the relationship between individual accountability and employee motivation levels.
Alternative Hypothesis (H_2): Self-efficacy partially or fully mediates the relationship between individual accountability and employee motivation levels.

1.6. Significance of the study

Although there is a general belief that behavioural outcomes in organisations can be managed by holding employees accountable (Han & Perry, 2020a:289), a need remains to better understand and increase workplace accountability (Natria *et al*., 2022:1). The goal of this study was to improve the understanding of the micro-analytical perspective of accountability by exploring individual accountability and its influence on individual-level outcomes such as employee motivation (Han & Perry, 2020a:288). Additionally, this study addresses the gap in current research by examining the impact of self-efficacy as a mediator in the relationship between individual accountability and employee motivation (Hall & Ferris, 2011:142).

1.7. Preliminary literature review of the study

For organisations to be successful, employees are required to have high job performance and to display organisational citizenship behaviours (Robbins & Judge, 2023:62). Consequently, many organisations focus on improving their human resources (HR) strategies to increase employee motivation to achieve and sustain high job performance levels (Çetin & Aşkun, 2018:186). For this reason, it is crucial to understand the variables, such as individual accountability, that impact employee motivation. This study investigates whether there is a statistically significant and positive relationship between individual accountability as the independent variable and employee motivation as the dependent variable. Furthermore, this study explores the influence of self-efficacy as a mediator variable in this relationship. Figure 1-1 depicts the conceptual framework of this study.

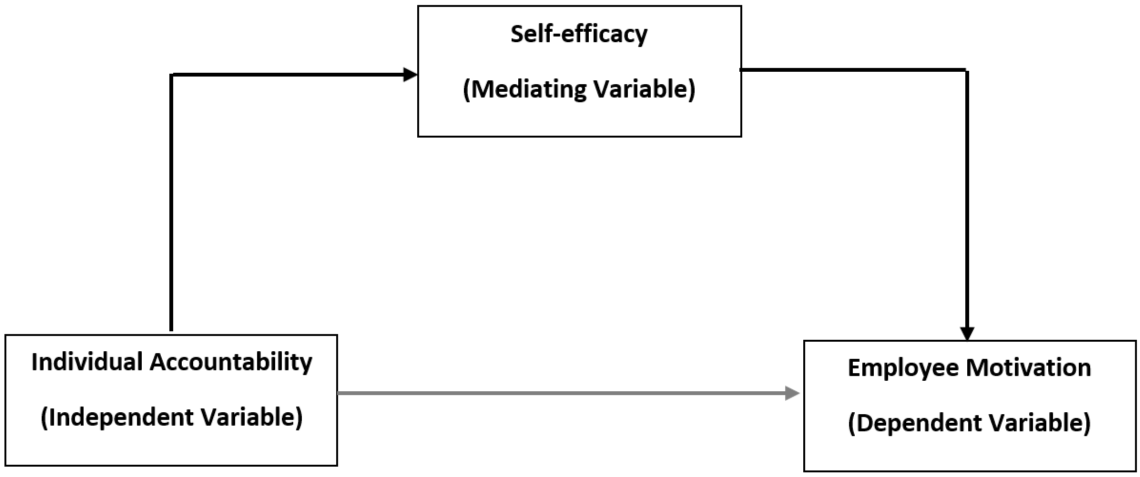

Figure 1-1: The conceptual framework for individual accountability, employee motivation, and self-efficacy

This preliminary literature review elaborates on the variables related to this study: individual accountability, employee motivation, and self-efficacy. It includes an outline of the findings related to these constructs and the research gaps identified in studies published in journals, books, and online databases.

Accountability is an individual's belief that they will be called upon to explain their actions to a third party with the expectation that such an evaluation will result in either a positive or negative consequence (Han & Perry, 2020b:226). In the organisational context, accountability is mutually beneficial to both employers and employees as it provides employees with direction, outlines the expectations of roles and joint obligations, and defines the evaluation criteria set by employers for job performance and behaviour (Wikhamn & Hall, 2014:458).

Accountability focused on the micro-level is known as individual or felt accountability (Frink *et al*., 2018:17855; Hall *et al*., 2017:205). According to Han and Perry (2020a:288), this view of accountability focuses on individual employee perceptions and experiences of accountability. There are five fundamental characteristics required for individual accountability in the workplace (Han & Perry, 2020a:297):

- Employees' belief that their actions are attributed to themselves.
- Employees acknowledge that other parties are observing their actions.

- Employees accept that their actions and behaviours are evaluated by the parties observing them.
- The acknowledgement of the employees that they are responsible for justifying their actions and behaviours to the parties observing them.
- The expectation by employees that there are consequences related to their actions that may include rewards or punishments.

Individual accountability has been linked to several positive organisational outcomes. In a study by Kuo *et al*. (2022:1816), individual accountability in conjunction with transformational leadership promotes innovative workplace behaviours and active thinking in employees. This suggests that individual accountability is an antecedent of proactive work behaviours among employees. A study by Chen *et al*. (2016:243) focuses on determining the relationship between individual accountability and task performance. The findings indicate that individual accountability fully mediates the relationships between transformational leadership and core self-evaluation with task performance in the workplace. However, it should be noted that both studies have been conducted using East Asian populations. Collectivist cultures are characterised by the entire group being accountable to the organisation such that the group determines and monitors its individuals' accountability norms and expectations (Gelfand *et al*., 2004:144). Thus, the individual accountability perspective can differ across cultural settings (Hall *et al*., 2017:218).

On the contrary, research also indicates that individual accountability can negatively affect employees. Findings from a study by Hall *et al*. (2006:93-95) suggest that high levels of job tension and emotional exhaustion occur in working environments with high levels of individual accountability and low job autonomy. This indicates that when employees do not have adequate resources to achieve work expectations, high levels of individual accountability result in increased anxiety due to concerns about the consequences, such as poor performance evaluations. Similarly, research by Hochwarter *et al*. (2014:371) has found that for work environments where the perception of organisational politics is high and proactive verbal expression by employees is low, high levels of individual accountability are associated with lower levels of job satisfaction and higher levels of job tension. These findings are attributed to employees who fail to utilise verbal expression to consciously influence high-pressure situations in high political environments, becoming more passive and experiencing adverse outcomes related to the stress arising from individual accountability. Accordingly, research suggests that while individual accountability is a necessary construct in organisations, it is complicated (Hall *et al*., 2017:205), and managers need to use individual accountability appropriately to achieve its benefits without negatively impacting the individual psychology of employees (Li *et al*., 2022: 9).

Employee motivation is the effort to achieve organisational objectives (De Sousa Sabbagha *et al*., 2018:136). For organisations to remain competitive, employee motivation is required to maintain a well-functioning workforce (Jungert *et al*., 2018:4). Employee motivation can be characterised into three main dimensions (Robbins & Judge, 2023:237):

- *Intensity* describes how much strength is put into the effort. This level of strength can range from low to high.
- *Direction* refers to how the effort is focused on benefiting the organisation.
- *Persistence* denotes how long an individual can sustain the effort to achieve the organisational goal.

Research indicates that employee motivation is an essential factor in the functioning of organisations. In a study by De Sousa Sabbagha *et al*. (2018:138-139), employees' intrinsic and extrinsic motivation levels have been found to predict staff retention. These findings imply that a potential strategy to reduce turnover rates and retain talent in organisations is to motivate employees. Research by Riyanto *et al*. (2021:170-171) indicates that motivation positively influences employee performance. Additionally, motivation and job satisfaction have been found to mediate the relationship between work engagement and employee performance. These findings suggest that to achieve and sustain high levels of employee performance, organisations must pursue strategies that include the active participation of employees in order to encourage job engagement and motivation. Based on the available research findings, organisations and managers must understand the underlying sources of employee motivation and the factors that can influence this (Lee & Raschke, 2016:163).

Self-efficacy in the workplace is an employee's perception of the ability to perform a task (Robbins & Judge, 2023:253). According to Agholor (2019:144), the characteristics of high self-efficacy in employees include approaching challenges with a positive mindset, developing an interest in tasks and a willingness to take reasonable risks, displaying resilience and perseverance when faced with failures, and accurately applying self-assessment to evaluate one's abilities. Self-efficacy increases the employees' sense of control over various situations in the workplace (Yagil *et al*., 2023:1), which results in positive organisational outcomes. Research by Carter *et al*. (2018:2497-2498) found a positive relationship between self-efficacy and job performance. However, the findings of this study also indicate that employee engagement has an independent and positive relationship with job performance. This suggests that for organisations to create a high-performance workforce, their HR strategy must incorporate assessments and development activities that address self-efficacy and employee engagement. A study by Ramchunder and Martins (2014:9-10) suggests that a significant relationship exists between self-efficacy and effective leadership. In addition, self-efficacy has been found to correlate negatively with ineffective leadership styles such as laissez-faire and passive management by exception. Recommendations based on these findings are that organisations include screening for self-efficacy during the recruitment process and create development programmes for self-efficacy for potential and current leaders. Thus, based on recent research findings, for organisational performance to be achieved and maintained, it is essential to understand and develop the self-efficacy beliefs of employees (Çetin & Aşkun, 2018:195).

Self-efficacy is crucial to maintaining motivation over time (Robbins & Judge, 2023:254). Unless employees believe their actions can result in needed positive outcomes, they are not motivated to act or persevere when faced with challenges or failures (Agholor, 2019:142). Hence, self-efficacy has been positively correlated with effort and willingness to work cooperatively (Ayupp & Kong, 2010:137), intrinsic motivation, and work performance (Çetin & Aşkun, 2018:192-193). Additionally, employees are more motivated to engage in expected behaviours and achieve organisational targets when they perceive themselves accountable for these outcomes (Mero *et a*l., 2014:1632). Under the conditions of high transformational leadership, individual accountability has been found to motivate employees to engage in innovative work behaviours (Kuo *et al*., 2022:1815). Research also suggests that when individual accountability is applied in a manner that is perceived as supportive of employee autonomy rather than a controlling management practice, it is positively correlated to the autonomous motivation of employees (O'Donoghue & van der Werff, 2022:1215).

Despite findings from research indicating that individual accountability interacts with several mediating and moderating variables in numerous ways (Hall *et al*., 2017:211), studies on the relationship between individual accountability and self-efficacy remain limited. Royle *et al*. (2005:64-65) suggest that self-efficacy moderates the relationship between individual accountability, organisational citizenship, and political workplace behaviours. Findings indicate that in conditions where individual accountability and self-efficacy are high, organisational citizenship behaviours are high and political behaviours are low. However, where self-efficacy is low in high individual accountability environments, organisational citizenship behaviours are low, and political behaviours are increased. While these findings indicate that a relationship between self-efficacy and individual accountability exists, this also highlights the complexity of individual accountability (Hall *et al*., 2017:208).

1.8. Clarification of concepts

Individual accountability, also known as felt accountability, refers to the subjective accountability experiences of employees (Han & Perry, 2020a:288). This analytical focus of accountability is on the micro-level (Hall *et al*., 2017:205). Understanding individual accountability is essential to determine the influence of accountability on individual behaviours and outcomes (Han & Perry, 2020a:288).

Motivation is both conscious and unconscious feelings and efforts of employees to take action to attain a specific goal (Riyanto *et al*., 2021:163). Motivation is regarded as a multidimensional variable. These dimensions include amotivation, which is defined as a lack of motivation towards achieving a goal; intrinsic motivation, which refers to undertaking a task for one's own sake; and extrinsic motivation, which is based on rewards and punishments (Gagné *et al*., 2015:179). Employees are considered to feel motivated to achieve outcomes when part of this process involves meeting their interests, aspirations and needs (De Sousa Sabbagha *et al*., 2018:136).

Self-efficacy refers to an individual's perception of their effectiveness in producing desired results (Bandura, 1977:193). Self-efficacy allows individuals to self-evaluate to identify areas for improvement and view work challenges as learning and self-development opportunities (Agholor, 2019:144).

1.9. Demarcation, delimitations and limitations

Despite this research study's contribution towards the body of literature related to understanding the factors that influence employee motivation, there were limitations. The main limitation of this study was that it was based on data collected from a selected South African steel organisation through purposive sampling. Therefore, the findings did not represent the perceptions and experiences of employees in the selected steel manufacturing company that were excluded from this study or the steelmaking industry within South Africa as a whole (Faasen, 2021:224). Additionally, as this study used a cross-sectional time horizon, the phenomena identified were only applicable to a particular time frame (Saunders *et al*., 2023b:212).

1.10. Research philosophy

In this study, the positivist research paradigm was applied. Positivism is based on the philosophical assumption that research is conducted objectively and neutrally, and that scientific knowledge can only be developed using verified and observable facts (Sefotho, 2021:9). This research philosophy was chosen because this study focused on objectively testing the research questions and hypotheses related to felt accountability, employee motivation, and self-efficacy. This was achieved by objectively collecting data through questionnaires (Hirschsohn, 2021a:32).

1.11. Research methodology

The methodological choice of this study was mono-quantitative. Quantitative research is based on the deductive approach in which data is gathered and statistically analysed to test hypotheses (Saunders *et al*., 2023b:184). For this study, data on the independent variable (individual accountability), dependent variable (employee motivation), and mediator variable (self-efficacy) was collected using a questionnaire to determine the statistical relationships between these constructs. As a single data-gathering technique was applied, this was a mono-quantitative study (Saunders *et al*., 2023b:184). Figure 1-2 summarises the general quantitative research process applied to this study.

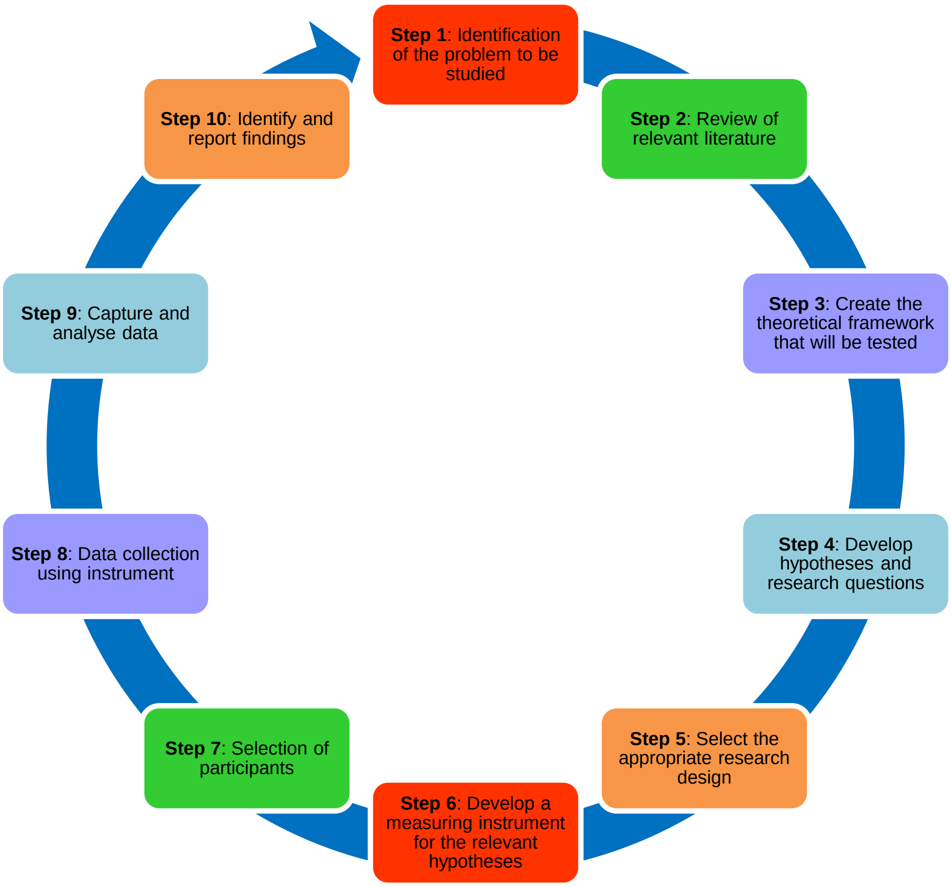

Figure 1-2: The quantitative research process (van Aardt & Hirschsohn, 2021:49)

1.12. Research design

1.12.1. Research strategy

The research strategy is the method that is used to collect data (Faasen & Hirschsohn, 2021:99). Quantitative research methods are primarily associated with experiment and survey research strategies (Saunders *et al*., 2023b:185). According to Lu *et al*. (2021:286), surveys conducted through questionnaires are used to gain data for empirical research on the attitudes and behaviours of respondents directly.

Data for this study was collected on the constructs of individual accountability, employee motivation, and self-efficacy using three existing questionnaires. These questionnaires were combined into a single questionnaire that the respondents completed online using Microsoft Forms. This research strategy was chosen due to its simplicity and cost-effectiveness in obtaining data from many respondents (Saunders *et al*., 2023b:195).

1.12.2. Time horizon

The period during which a research study is conducted is known as the time horizon. This study used a cross-sectional research design to collect data over a specific period (Faasen & Hirschsohn, 2021:107). This time horizon was chosen due to the time constraints placed on this study (Saunders *et al*., 2023b:213) by the North-West University (NWU) Business School.

1.12.3. Permission to conduct research and informed consent

To use respondents from the selected organisation, a formal request and motivation were submitted to the Chief Human Resources Officer (CHRO) for approval. Furthermore, the researcher signed a non-disclosure agreement (NDA) with this steel organisation.

Once formal approval was obtained, respondents were required to consent to participate in this study before data collection occurred (National Health Research Ethics Council, 2014). This was done by communicating the link to the informed consent letter and the online questionnaire to potential respondents.

1.13. Participants

1.13.1. Population

This study's population consisted of all permanent employees of a selected South African steel organisation. The sample frame consisted of mid-to-senior management levels in the organisation. This sample frame was chosen as these levels of management are often directly responsible for ensuring that both the well-being of employees and organisational outcomes are achieved (Hall *et al*., 2017:214).

1.13.2. Inclusion criteria

Respondents for this study were required to be permanent employees in the selected South African steel organisation with roles in the mid-to-senior management levels. Based on the organisation's structure and definition, this included experienced and professionally qualified specialists such as senior engineers and engineers.

1.13.3. Exclusion criteria

Respondents in the sample population were excluded if they had a total working experience of less than three years or were employed by the organisation for less than six months.

1.14. Sampling

Sampling in a research project involves selecting the relevant people and organisations to participate in the study to meet constraints such as time and cost (Hirschsohn, 2021b:14). Non-probability sampling was used as an online questionnaire was used to collect data for this study (Saunders *et al*., 2023c:295). The non-probability sampling procedure used is purposive sampling to ensure that respondents were chosen based on this study's inclusion and exclusion criteria (Faasen, 2021:225).

In addition to the sampling type and procedure, decisions on sample size are crucial and depend on several considerations, including time and cost constraints and the maximum sample size (Faasen, 2021:229). The inclusion and exclusion criteria of this study influenced this sample size. The inclusion criteria required the respondents to be permanent employees in a selected South African steel manufacturer with roles in the mid-to-senior management levels. Based on exclusion criteria, respondents with a total working experience of less than three years or employed by the organisation for less than six months were excluded from this study. When applied to the current organogram of the steel organisation, this identified 369 potential respondents. Of this sample population, 119 respondents participated in this study.

1.15. Data collection methods

1.15.1. Data collection

Although data collection can occur in several ways, the method depends on several considerations, including time efficiency, response rates, and data capturing and cleaning (du Toit, 2021:238). For this study, a self-administered questionnaire using an online platform, being Microsoft Forms, was used. This data collection method was chosen as it allowed respondents to answer at their own pace for a given period, prevented interviewer variability, and was time efficient (du Toit, 2021:239). The link to the questionnaire was sent via email to potential respondents who met the study requirements by a representative of the selected steel organisation's HR department.

1.15.2. Data collection tool

For quantitative research purposes, questions chosen for a questionnaire must be directly linked to the research concepts being studied (du Toit, 2021:250). For this study, the questionnaire was divided into four sections as follows:

Section 1 focused on the respondents' demographic information. According to Section 12 of the Protection of Personal Information Act 4 of 2013, all personal information must be collected directly from the subject with their consent. The requested demographic data was limited to age, gender, work experience and organisational role. This data was used to evaluate the representativeness of the study sample and was not used for statistical purposes.

Section 2 was based on an existing questionnaire for measuring individual accountability in organisations developed by Frink *et al*. (2018:2). This three-dimensional scale measures “Intensity”, “Focus”, and “Salience”. According to Hall *et al*. (2017:214), research on individual accountability has been constrained by the absence of validated multi-dimensional instruments. As such, this scale was chosen to be used in this research study as it has been tested for both reliability and validity (Frink *et al*., 2018:23).

Section 3 measured employee motivation using the Multi-dimensional Work Motivation Scale (MWMS) questionnaire developed by Gagné *et al.* (2015:179). This scale measures the dimensions of “Amotivation”, “Extrinsic Regulation”, “Introjected Regulation”, “Identified

Regulation", and "Intrinsic Motivation". The MWMS was selected for use in this study as it has been tested for reliability and validity and focuses on the work domain (Gagné *et al*., 2015:192).

Section 4 consisted of the unidimensional New General Self-Efficacy Scale (NGSE) developed by Chen *et al.* (2001:62). This scale was used in this study since existing research has found it correlates to motivation-related variables (Chen *et al*., 2001:79).

1.16. Reliability and validity of the measuring instruments

Measurement validity and reliability are related to the research instrument used in a study (Faasen & Hirschsohn, 2021:107). A valid questionnaire ensures that accurate data related to the concept being studied is collected, while reliability allows for the data collected to be consistent (Saunders *et al*., 2023a:520).

The methods used to establish a measuring instrument's validity are face, construct, predictive, concurrent, and convergent (van Aardt & Hirschsohn, 2021:55). When using multiple-indicator measuring instruments, the internal reliability is to be tested (Faasen & Hirschsohn, 2021:107). The most common internal reliability test is Cronbach's alpha (α) which ranges between 0 and 1 (Saunders *et al*., 2023a:523).

The measuring instruments used in this study are reliable. The study on Individual Accountability in Organizations Scale (IAOS) development and validation has found the following Cronbach's alpha values for the scale and its factors (Frink *et al*., 2018:32-34):

- Overall scale: α= .86
- Intensity dimension: α= .81 (Study 1), α= .78 (Study 2)
- Focus dimension: α= .84 (Study 1), α= .81 (Study 2)
- Salience dimension: α= .87 (Study 1), α= .76 (Study 2)

The Cronbach's alpha values for the Multidimensional Work Motivation Scale (MWMS) across different languages demonstrate the scale's reliability in measuring various aspects of work motivation. For example, in English culture and language, the Cronbach's alphas are (Gagné *et al*., 2015:186):

- Intrinsic: α= .90
- Identified: α= .75
- Introjected: α= .70
- Extrinsic motivation: α= .76

- Amotivation: α= .79

Cronbach's alphas across different languages indicate the scale's robustness and applicability in different cultural contexts.

Additionally, Cronbach's alpha values for the reliability of the New General Self-Efficacy Scale (NGSE) developed by Chen *et al*. (2001:72) are α= = .86 (Time 1) and α= .90 (Time 2). The Cronbach alphas for this unidimensional scale, in conjunction with the shorter number of items, allow this scale to be an appealing option for self-efficacy research.

1.17. Data analysis

Statistical analysis is an integral part of quantitative research. This study's statistical analysis was computed using Microsoft Excel (MS Excel). This analysis consisted of descriptive statistics to calculate the total, mean, and standard deviation of the demographics, employee motivation, individual accountability, and respondents' self-efficacy. Cronbach's alpha (α) was used to measure the reliability of the data collected during this study.

Linear regression was used to explore the association and causation relationship between individual accountability and employee motivation (Bartley & Hashemi, 2021:256-257) to test the first set of hypotheses ($H_{0,1}$ vs. H_1).

Mediation analysis was conducted using regression analysis and the method proposed by Baron and Kenny (1986:1176-1177) to test the second set of hypotheses ($H_{0,2}$ vs. H_2). This process involves first regressing self-efficacy on individual accountability (Path A). Next, employee motivation is regressed on individual accountability (Path C). This direct path analysis was also applied to test the first hypotheses. In the third step, employee motivation is regressed on individual accountability and self-efficacy (Path B). Lastly, Baron and Kenny (1986:1177) recommend that a Sobel test be performed to determine the significance of the overall indirect path (Path A and B).

1.18. Ethical considerations

As this study involved research with human respondents, the two main ethical issues that required consideration are harm and covertly conducting research (Saunders *et al*., 2023b:213). Due to the risks posed by these ethical issues, research must comply with the Protection of Personal Information Act 4 of 2013 of the Republic of South Africa and the ethical requirements of the NWU.

The first requirement was to obtain formal permission from the CHRO of the selected steel organisation to use the respondents. Informed consent of each potential respondent was then sought before the research was conducted. The informed consent document was included in the introductory section of the questionnaire. This notified respondents of the following (National Health Research Ethics Council, 2014):

- The purpose for the data collection and how it would be used.
- Information on compensation and other incentives for participation in this study.
- The institution through which this study was conducted and the lead researchers with access to the data responsible for its management.
- Processes that were used to ensure that responses were anonymised.
- Participation would be voluntary, and subjects could withdraw their participation at any time during the study without any consequences.

Furthermore, to ensure anonymity, respondents were not requested to provide identifying information, such as names or contact details. Demographic information was limited to age, gender, work experience, tenure, and organisational role.

1.19. Power relationships and gatekeeper intervention

To prevent interviewer variability, the researcher provided the HR consultant allocated to assist with this research project with a list of the following:

1. Exclusion and inclusion criteria.
2. The link to the letter of informed consent and the online questionnaire.

This HR consultant acted as a gatekeeper and communicated the link to the informed consent letter and the questionnaire for this study to all employees who met the required study criteria.

1.20. Dissemination of the results of the study

The findings were requested to be presented to the CHRO of the organisation selected for this study as a formal report. This report summarised the key findings, their implications, and recommendations.

For academic purposes, this research dissertation is available through the NWU Institutional Repository (NWU-IR), Baloka. This open-access digital archive provides a platform for NWU research to be equally accessed by academic staff, students, and the general public globally.

1.21. Chapter outline of dissertation

This research dissertation's general chapter layout is as recommended by Hirschsohn (2021b:17). It is illustrated in Figure 1-3.

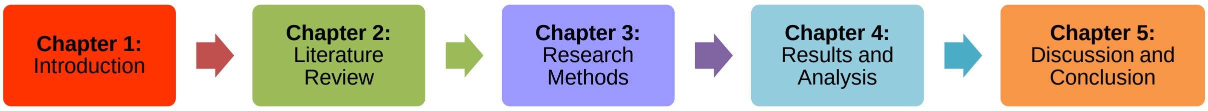

Figure 1-3: The general layout of a research dissertation (Hirschsohn, 2021b:17)

Chapter 1: Introduction

This chapter summarised individual accountability, employee motivation, and self-efficacy in the workplace based on current theoretical knowledge. This chapter included this study's research questions, objectives, and problem statement. Information on the rationale for this study, limitations, and research methodology was also provided.

Chapter 2: Literature Review

This chapter critically evaluated relevant theoretical ideas and findings related to individual accountability, employee motivation, and self-efficacy in the workplace and how these constructs interrelate. A summary of individual accountability, employee motivation, and self-efficacy was offered to define these constructs, highlight their characteristics, and describe their influence on organisational behaviours and outcomes.

Chapter 3: Research Methods

This chapter outlined the research methods used for this study. This included a detailed description of the research paradigm, approach, methodological choice, research strategy, time horizons, and data collection techniques. This chapter provided information on the measuring instruments used for individual accountability, employee motivation, and self-efficacy, including details on the reliability and validity of the chosen instruments. Furthermore, the methods used for data collection, the statistical analysis used for data evaluation, and the ethical considerations of this study were discussed.

Chapter 4: Results and Analysis

This chapter describes the findings of this research study, which were determined using statistical analysis of the collected data. It also reports the descriptive statistics and relationship correlations between the variables, which are individual accountability, employee motivation, and self-efficacy.

Chapter 5: Discussion and Conclusion

This chapter discussed the implications of the findings of this study and identified opportunities for future research.

1.22. Summary

To remain competitive in the current business environment requires organisations to implement various strategies that influence accountability and individual employee outcomes. However, to predict the impact of these strategies, it is necessary to understand the individual employee perception of accountability (Han & Perry, 2020a:288). It is also crucial to understand whether variables such as employee motivation are influenced by individual accountability and the impact of mediating and moderating variables on these relationships (Hall & Ferris, 2011:142). This study investigates whether a positive statistically significant relationship exists between individual accountability (independent variable) and employee motivation (dependent variable). Furthermore, this study explores the impact of self-efficacy as a mediator of this relationship.

This chapter provides an overview of the problem statement, rationale, research objectives, and research questions. It also provides an outline of the hypotheses used to address the research questions. This study also provides insight into the research philosophy, methodology, and design, as well as the population of the study, inclusion and exclusion criteria, data collection methods, and instruments that have been used.

Chapter 2 provides a detailed evaluation of the current literature on individual accountability, employee motivation and self-efficacy as a mediator.

CHAPTER 2 LITERATURE REVIEW

2.1. Introduction

Organisations must develop and implement various strategies to gain a competitive advantage and realise greater profits in the current complex business environment (Thompson *et al*., 2022:5). One such strategy is to enhance business performance by creating and maintaining active employee engagement by focusing on employee motivation (Riyanto *et al*., 2021:162-163). Organisations also commonly employ strategies using accountability processes and procedures to align employee behaviours and interests with organisational goals (Mero *et al*., 2014:1629). As organisations aim to have motivated and accountable employees, it is essential to understand the link between individual accountability and employee motivation. Furthermore, to gain a deeper understanding of the interaction between individual accountability and employee motivation, it is crucial to examine the influence of mediators in this relationship (Hall & Ferris, 2011:142).

2.2. Theoretical foundation of individual accountability

Organisations currently view accountability as vital to maintaining and enhancing organisational efficiency, increasing employee performance, and promoting coordination in the workplace (Li *et al*., 2022:1). Individual accountability refers to the expectation of an employee that they will be required to justify their actions to a third party with the belief that this appraisal will result in consequences that are either positive or negative (Han & Perry 2020b:226)). This is a phenomenological view (Han & Perry, 2020a:291), as accountability is considered a state of mind that influences the responses and behaviours of an individual (Frink & Klimoski, 2004:3).

Schlenker *et al.* (1994:635) have advanced the pyramid model of accountability based on a phenomenological perspective (Frink *et al*., 2018:9). This model considers four elements and the connections' strength to determine how accountable an employee is perceived (refer to Figure 2-1). These elements are (Schlenker *et al*., 1994:634-635): *Prescriptions* that guide an employee's behaviour in a given situation. This includes the business code of conduct, organisational policies and performance standards; an *event* or the period over which an employee's actions are evaluated, such as per task or annually; the *identity* images that describe an employee's qualities, aspirations, commitments and beliefs that are relevant to specific prescriptions and events; an *audience* that evaluates the links between the three other elements including oneself, peers, subordinates and superiors.

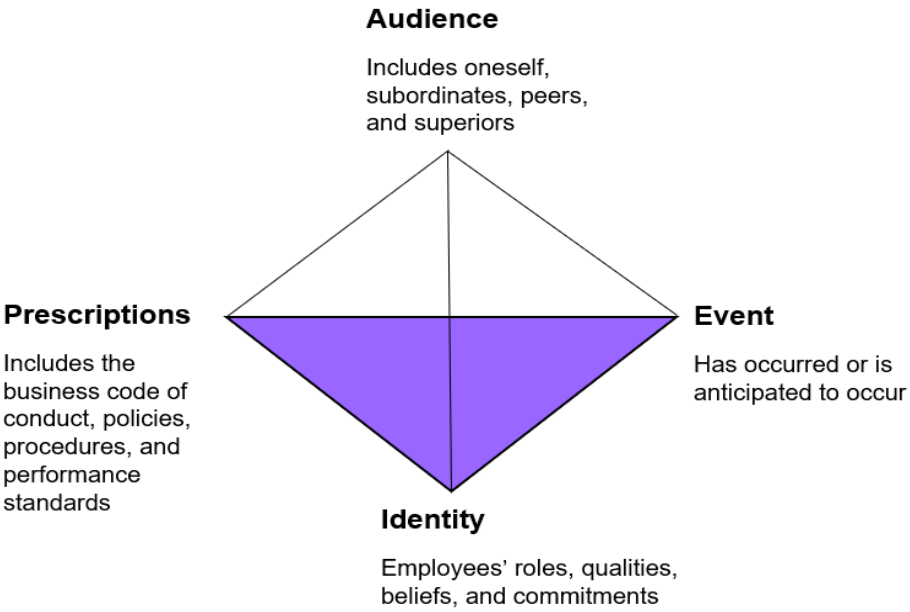

Figure 2-1: The pyramid model of accountability (Schlenker *et al*., 1994:634-635)

Frink and Klimoski (cited in Hall *et al*., 2017:207) suggest a broad framework for accountability using the phenomenological view and role theory. According to Frink and Klimoski (2004:8), one of the main aspects of role theory applicable when modelling workplace behaviours is that individual behaviours are governed by complex forces from interpersonal relationships throughout the organisation. Secondly, workplace relationships are influenced by personal and institutional factors such as procedures and policies. Lastly, role theory considers the alignment of an individual with a set of expectations. Hence, the basis of Frink and Klimoski's model is that role theory explains the fundamental relationships and essential components of individual accountability (Frink & Klimoski, 2004:9).

To gain deeper insight into employees' subjective interpretation of accountability in the workplace, Hall *et al*. (2007:407) argue that an accountability lens must be utilised to evaluate an organisation's accountability environment. The main aspects of the accountability environment that affect employees' accountability include (Hall *et al*., 2007:407-408):

1. *Accountability source* is an employee's sense of individual accountability in the workplace.

2. The a*ccountability focus* alludes to the extent to which employees are held accountable for the standards, procedures, and policies used in the decision-making process and its outcomes.
3. *Accountability intensity* is the degree to which employees are held accountable for several organisational outcomes to multiple persons.

Considering the models above of individual accountability, several common concepts are noted. Firstly, based on the phenomenological perspective, individual accountability is a state of mind, which makes it a subjective view of accountability (Frink & Klimoski, 2004:3; Li *et al*., 2022:2). Secondly, human agency theory supports the notion that individuals can exercise control or self-regulation over their thoughts and behaviours based on the consequences this produces for them (Goller & Harteis, 2017:87). This allows for shared expectations of behaviour to exist through the evaluation and sanctioning of an individual's actions and behaviours (Hall *et al*., 2017:207). Thirdly, accountability pressures influence how people think and are regarded as an antecedent of proactive workplace behaviours (Kuo *et al*., 2022:1816; Patil *et al*., 2017:20). Lastly, the combination of formal and informal organisational norms and expectations enhances individual accountability (Han & Perry, 2020b:228).

This study is based on the theoretical foundation described by the pyramid model of accountability proposed by Schlenker *et al.* (1994:635). This theoretical foundation is chosen as the strength of the linkages between *perceptions,* the *event, identity* and *audience* determine the actions and behaviours employees engage in (Han & Perry, 2020a:292). In this manner, the pyramid model of accountability encompasses the possibility that the *perceptions* of accountability may vary between employees in similar positions in the same organisation and may lead to different behaviours (Frink *et al*., 2018:9). As the purpose of this study is to establish whether there is a relationship between individual accountability and employee motivation, the chosen theoretical foundation aligns with this primary objective.

2.3. Theoretical foundation of employee motivation

Employee motivation is an individual's effort to achieve organisational targets (De Sousa Sabbagha *et al*., 2018:136). As achieving organisational targets is vital to maximising business performance, organisations and managers must understand the factors that drive employee motivation (Lee & Raschke, 2016:163).

Motivation is broadly categorised as either intrinsic or extrinsic. Extrinsic motivation refers to stimuli that are external to the task that motivate the actions of an individual (Locke & Schattke, 2019:283; Morris *et al*., 2022:1801). This includes rewards such as bonuses, benefits and promotions (Singh, 2016:199). Intrinsic motivation is internal to an individual and occurs when tasks and objectives either align with an individual's values and attitudes or are personally meaningful (Delaney & Royal, 2017:129). The cognitive evaluation theory (Deci, 1971:107), proposes that changes in the interpretation of a task influence an individual's intrinsic motivation and cognitive evaluation of different types of rewards. This study suggests that when the external reward is tangible, such as money, an employee's intrinsic motivation decreases as the drive to perform the task becomes the expectation of a financial reward (Deci, 1971:117). Conversely, when the external reward is social approval, such as positive feedback, an individual's intrinsic motivation increases due to a sense of satisfaction in performing the activity (Deci, 1971:108).

Causality orientation theory suggests that each employee differs in the degree to which they interpret their behaviour as arising from causes that are internal to themselves or from external events and factors (Hagger & Hamilton, 2021:710-711). Furthermore, these causality orientations are linked to an individual's autonomous motivation, which originates from within an employee due to aspects such as individual interest in a task (Kunz, 2015:28). Deci and Ryan (cited in Hagger & Hamilton, 2021:711) propose that there are three dimensions of causality orientation which are autonomy orientation, control orientation, and impersonal orientation. These causality orientations are described as follows (Djeriouat, 2017:259; Hagger & Hamilton, 2021:711):

1. Autonomy-oriented employees consider their behaviours to be internally driven and intentionally orient themselves toward workplace events that support their autonomous motivation.
2. Control-oriented employees consider their behaviours controlled by external events or factors in their workplace environment, such as deadlines and rewards, that hinder their autonomous motivation.
3. Impersonal-oriented employees perceive their behaviours to be beyond their conscious control, do not understand the reasons that drive their actions and do not consider events in their workplace environment to support their autonomous motivation.

Self-determination theory (SDT), as proposed by Deci and Ryan (2000:233), incorporates cognitive evaluation theory and causality orientation theory to develop a robust theory of human motivation (Gagné & Deci, 2014:1-2). SDT suggests that for an employee to achieve psychological well-being, it is necessary for all three basic psychological needs to be satisfied (Deci & Ryan, 2000:229). Research suggests that when an employee's basic psychological needs are fulfilled, the individual is more autonomously motivated (Deci & Ryan, 2014:16). Table 2-1 outlines these basic psychological needs.

Table 2-1: Needs required for employee well-being and psychological growth and well-being

Basic Psychological Needs	Description
Autonomy	1. This refers to the need to choose to perform tasks. 2. When this need is met, employees experience a feeling of integrity as their thoughts and actions are authentic. 3. Employees experience inner conflict and a sense of pressure to conform when this need is unmet.
Competence	1. This is described as the need for employees to possess and master the necessary skills and knowledge to perform their tasks effectively. 2. When this need is met, employees feel capable of engaging in challenging activities that can further develop their skills and expertise. 3. Employees feel a sense of failure and helplessness when this need is not met.
Relatedness	1. Employees need to bond and connect with others in the workplace. 2. When this need is unsatisfied, employees feel alienated and excluded from their peers, superiors and subordinates. 3. If this need is satisfied, employees feel that others consider them significant and care for their well-being.

(Adapted from source: Vansteenkiste *et al.,*2020:3)

SDT is based on the hypothesis that intrinsic motivation in employees is facilitated by workplace conditions that satisfy their basic psychological needs (Deci & Ryan, 2000:233). However, employees often engage in tasks and activities to fulfil their duties and responsibilities rather than due to engagement or feelings of satisfaction (Gilal *et al*., 2019:31). Thus, it is essential to consider the influence of extrinsic motivation, which involves employees undertaking tasks to achieve some future value (Locke & Schattke, 2019:282). While extrinsic motivation arises from stimuli external to the task, the degree to which an individual starts to want to perform a task results in varying levels of extrinsic motivation (James *et al*., 2019:290). These levels of extrinsic motivation or regulations are (Deci & Ryan, 2000:236-237):

1) *External regulation* refers to employees' motivation to control their behaviour to either gain a desired reward or avoid punishment. This form of motivation is the most controlled.
2) *Introjected regulation* is the motivation of an employee to punish or reward themselves due to their feelings of self-worth, pride, guilt, and shame. This is also a controlled form of motivation due to an individual's internal conflict stemming from a lack of willingness to adhere to expected behaviours.

3) *Identified regulation* is the motivation to conform to expected behaviours after recognising and accepting their purpose and value. The employee experiences more ownership of the expected behaviours and is less conflicted about conforming to them.
4) *Integrated regulation* refers to an employee's motivation to engage in behaviours that have been fully internalised to achieve self-regulation.
5) *Amotivation* is when employees lack motivation due to low efficacy or a sense of control over a desired organisational outcome.

The key aspects of SDT are summarised in Figure 2-2.

Employee Behaviour	Not Self-Determined					Self-Determined
Type of Motivation	**Amotivation**	**Extrinsic**				**Intrinsic**
Type of Regulation	Not Regulated	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Locus of Causality	Impersonal	External	To Some Extent External	To Some Extent Internal	Internal	Internal

Figure 2-2: A summary of the varying degrees of self-determination based on employee behaviour, motivation, locus of causality and self-regulation (Deci & Ryan, 2000:237)

This study is based on the theoretical foundation described by SDT as proposed by Deci and Ryan (2000:233). Due to its comprehensiveness, SDT remains one of the most widely researched frameworks (Van den Broeck *et al*., 2016:1196). This is because SDT considers motivation a multidimensional construct where varying levels of motivation are possible (Howard *et al*., 2020:534). Furthermore, SDT has been used as the basis of several instruments for studying organisational behaviour, such as the Multidimensional Work Motivation Scale (MWMS) (Gagné *et al*., 2015:178) used in this study.

2.4. Theoretical foundation of self-efficacy

As Badura proposes (cited in Williams & Rhodes, 2016:115), self-efficacy theory considers an efficacy expectation to be the conviction of an employee that they can successfully perform the behaviours needed to produce the desired outcomes. Employees choose to undertake and engage in tasks where they are confident of their success and avoid activities in which they lack confidence (Klassen & Klassen, 2018:76).

Self-efficacy theory is incorporated into the more comprehensive social cognitive theory (Howardson & Behrend, 2015:235). Social cognitive theory proposes that employees contribute to their level of motivation through the combined interaction of environmental events and the individual's cognitive, action, affective, and personal factors (Bandura, 1989:1175). Social cognitive theory suggests that self-efficacy influences employee motivation by sustaining the perseverance of employees to succeed in achieving their goals despite the failures and setbacks that they may experience and decreases the time required by employees to recover their self-assurance in their capabilities in difficult workplace situations (Bandura, 1989:1176). A central concept of social cognitive theory is that employees strive to achieve a sense of agency (Schunk & DiBenedetto, 2020:2). This is exercised by setting challenging goals and executing and adjusting strategies to achieve them. Furthermore, the process of an individual assessing their level of self-efficacy is cognitive (Schunk & DiBenedetto, 2020:3) and involves information from the employee's prior experiences with mastering or failing at a task, learning from others' experiences, physiological and emotional state, and social persuasion (Lent, 2016:581).

The theoretical foundation of this study is social cognitive theory. This is as research supports the motivational variables considered by social cognitive theory (Schunk & DiBenedetto, 2020:1). Additionally, social cognitive theory incorporates the influence of social cues on the individual's perception of their self-efficacy (Sun *et al*., 2024:3). As accountability arises from the shared expectations of organisational behaviours (Hall *et al*., 2017:207), it is important to consider the impact that these social cues have on an employee's self-efficacy.

2.5. Empirical studies on individual accountability, motivation and self-efficacy and the importance of these constructs for organisations and employees

According to Wikhamn and Hall (2014:468), an organisation's overall success is influenced by its employees' decisions and actions. Hence, it is crucial to understand individual accountability and predict its impact on individual employee outcomes (Han & Perry, 2020a:288). Using individual accountability role theory, Kuo *et al*. (2022:1809-1811) explore the influence of individual accountability and transformational leadership on employee extra-role behaviours in organisations. Findings from this study suggest that the leadership styles of supervisors play a crucial function in conveying role expectations to employees, and this mediates the relationship between individual accountability and appropriate workplace behaviours (Kuo *et al*., 2022:1817).

Research by Royle (2017:36) focuses on investigating the influence of individual accountability on the link between the Big Five personality traits and job satisfaction. Findings suggest that individual accountability partially mediates the relationship between openness, emotional stability, agreeableness and conscientiousness traits with job satisfaction. Hence, testing employees' personalities can be a tool to predict their accountability and the probability that they will be satisfied in their jobs as part of an organisation's HR practices (Royle, 2017:34). This is because dissatisfied employees demonstrate behaviours that organisations want to avoid such as low levels of productivity and high absenteeism (Shaju & Subhashini, 2017:75).

A study by Mero *et al*. (2014:1633-1634), explores if individual accountability relates to task performance and mediates the relationship between the monitoring behaviours managers use and task performance. Findings indicate that individual accountability strongly correlates with task performance (Mero *et al*., 2014:1641). Furthermore, the relationship between managerial monitoring behaviours and task performance is fully mediated by individual accountability (Mero *et al*., 2014:1645). This implies that when managers apply increased monitoring behaviours, employees perceive greater individual accountability for organisational outcomes (Mero *et al*., 2014:1647).

However, research indicates that increasing the demands and organisational mechanisms used for individual accountability may be associated with negative effects (Hall *et al*., 2017:215). A study by Hochwarter *et al*. (2014:371) indicates that in environments where individual accountability and organisational politics are high and employees do not proactively voice their concerns, feelings or opinions, there is a decrease in employee performance. This is attributed to higher levels of individual accountability being associated with increased levels of job tension and lower levels of job satisfaction (Hochwarter *et al*., 2014:369) as employees perceive that they lack control over their workplace environment. Li *et al*. (2022:4) have found that the link between individual accountability and task performance is mediated by obsessive passion (Li *et al*., 2022:7). This suggests that individual accountability is associated with employees feeling pressured to undertake activities and tasks (Pollack *et al*., 2020:316). Furthermore, the relationship between individual accountability and employee emotional exhaustion is mediated by work overload (Li *et al*., 2022:8). This implies that higher levels of individual accountability increase employees' concerns with the associated rewards and punishments for completing or failing to complete a task. According to Li *et al.* (2022:5), to manage these concerns, employees attempt to sustain their efforts through personal sacrifices that may trigger role stress. These findings highlight that although accountability is an essential aspect of the workplace, it is also a complicated construct (Hall *et al*., 2017:205) that must be correctly applied to achieve organisational targets without negatively impacting the psychology of employees (Li *et al*., 2022:9).

Another factor that is crucial for organisations is employee motivation. Motivation aids employees to work proactively and react quickly to obstacles (Delaney & Royal, 2017:129). Research by Reizer *et al*. (2019:417) explores the relationship between motivation and job performance. Based on these findings, autonomous motivation is positively associated with job performance since it influences employees' positive emotions and job satisfaction (Reizer *et al*., 2019:422). Thus, employees who perform for self-determined and self-endorsed reasons experience interest and well-being in their jobs (Hagger & Hamilton, 2021:712). Furthermore, Reizer *et al*. (2019:422) have found that controlled motivation is linked to negative emotions in employees and, consequently, negatively correlated to employee satisfaction. This indicates that organisations must be cautious when applying controls such as monitoring or contingent incentives if the aim is to achieve high employee job satisfaction and organisational performance (Reizer *et al*., 2019:425).

A study by Engidaw (2021:8) investigates the link between motivation and employee engagement. Findings indicate that intrinsic, extrinsic, and overall motivation all have a positive and significant relationship with employee engagement. Employees who are engaged give their maximum potential at work, such as by making innovative product improvements and providing high levels of customer service, which improves organisational performance and creates a competitive advantage (Evangeline & Ragavan, 2016:3). Hence, organisations should use a combination of techniques to promote both employee intrinsic and extrinsic motivation such as by creating an appealing work atmosphere, recognising employees who achieve targets, providing competitive salaries, and offering growth opportunities (Engidaw, 2021:11).

Sarmad *et al*. (2016:174) examine the link between motivation and employee retention. Findings indicate a significant positive correlation between motivation and employee retention. The present global war for talent has led to the highest recorded number of employees leaving their positions, negatively impacting business continuity worldwide (Morshidi *et al*., 2023). While financial security is linked to employee retention, employees remain committed to an organisation based mainly on their motivation levels (Sarmad *et al*., 2016:183-184). Hence, it is recommended that the motivational mechanisms that organisations invest in include employee training and development programmes, ongoing feedback and support from direct-line managers to their sub-ordinates regarding their achievement of organisational targets, and processes that increase employee involvement in decision-making that impact their work functions (Kaliyamoorthy *et al*., 2018:40).

As employees' attitudes, values, and awareness of their ability to do their work influence their overall performance (Agholor, 2019:140), self-efficacy is an essential construct for organisations to focus on. Research by Syabarrudin *et al.* (2020:135) focuses on the impact of employee self-efficacy on organisational commitment. Organisational commitment is defined as an employee’s obligation to remain with a specific company (Yousef, 2017:79). This study suggests a significantly positive correlation exists between self-efficacy and organisational commitment. However, a significant positive correlation between self-efficacy and job satisfaction mediates the relationship between self-efficacy and organisational commitment (Syabarrudin *et al*., 2020:139). Consequently, it is suggested that organisations must focus on improving employee self-efficacy to increase job satisfaction and organisational commitment.

Bargsted *et al.* (2019:157) explore the relationship between self-efficacy and job satisfaction with work design characteristics as mediator variables. This includes physical, knowledge, social, and task characteristics of work design. This research suggests that self-efficacy is positively correlated with job satisfaction. Furthermore, the mediator variables of task and social characteristics are significantly positively correlated with job satisfaction and fully mediate the relationship between self-efficacy and job satisfaction (Bargsted *et al*., 2019:160-161). This implies that employees with higher self-efficacy perceive task and social characteristics of work design as a challenge to overcome, influencing their behaviours and attitudes and resulting in higher job satisfaction. Due to the influence of self-efficacy, it is advised that organisations enhance employee self-efficacy through coordinated skills development programmes, training and regular feedback on employee performance (Agholor, 2019:148).

2.6. Relationship between individual accountability and employee motivation

Employees are one of the most valuable assets in any business, and their workplace motivation directly influences organisational performance (Riyanto *et al*., 2021:162-163). Hence, it is crucial to understand the relationship between employee motivation and other variables present in organisations, such as individual accountability. A study by O'Donoghue and van der Werff (2022:1214) indicates that individual accountability significantly mediates the relationship between empowering leadership and autonomous motivation. Findings suggest that individual accountability originating from empowering leadership influences employees' identified motivation and is also perceived to support employees' need for autonomy (O'Donoghue & van der Werff, 2022:1215). Furthermore, this study notes that increased identified motivation is strongly related to improved employee work performance, which implies that current HR practices must focus on increasing employee autonomous motivation.

Waring *et al.* (2013:146) explore the influence of the intensity of individual accountability on changes in the motivational goals of employees. This study focuses on prosocial and self-motivation where prosocial motivation refers to the goals and intentions of an individual to assist and benefit others (Batson, 2022:1). In contrast, self-motivation refers to an individual's goals and intentions to maximise personal gain (Yan & Hollingshead, 2022:1065). Findings from this study indicate that low levels of individual accountability positively correlate with employees' prosocial motivation, while high levels of individual accountability significantly correlate with self-motivation.

This study notes that when a crisis occurs, which is in conjunction with high levels of individual accountability, employees are more self-motivated towards self-preservation (Waring *et al*., 2013:146). This study highlights that accountability tools and mechanisms in the workplace must be appropriately applied to achieve the desired benefits (Li *et al*., 2022:9).

Research by Waseem *et al*. (2021:447) has found that individual accountability is a crucial driver of employee motivation that enables value co-creation. It is proposed that individual accountability from an organisation's accountability measures allows employees to feel a sense of responsibility for their tasks, increasing employee motivation to engage in activities that result in task completion (Waseem *et al*., 2021:448). This implies that individual accountability motivates employees to achieve collective organisational goals, referred to as normative goals, which leads employees to engage in extra-role behaviours to achieve these organisational targets (Waseem *et al*., 2021:450). Extra-role behaviours refer to employees' contributions outside their official job descriptions. Still, they are essential for the organisation to function efficiently and effectively (Wahda *et al*., 2020:3) to achieve and maintain its competitive advantage.

2.7. Influence of self-efficacy as a mediator

Self-efficacy refers to an employee's judgment of their ability to perform tasks in different workplace situations (Bandura, 1982:122). Employees with high self-efficacy view challenges as learning opportunities, approach problems with a positive mindset, have a higher sense of fulfilment and are more resilient and willing to persevere to overcome obstacles (Agholor, 2019:144). Consequently, self-efficacy has been positively associated with employee job performance (Na-Nan & Sanamthong, 2020:11), workplace well-being (Singh *et al*., 2019:1701) and organisational commitment (Syabarrudin *et al*., 2020:140).

Despite limited research on the mediating role of self-efficacy in the relationship between individual accountability and employee motivation, researchers have studied the impact of self-efficacy as a mediator in other relationships. Peng and Mao (2015:810) explore the influence of self-efficacy as a mediator variable in the relationship between person-job fit and job satisfaction. Findings from this study indicate that self-efficacy partially mediates this relationship as high person-job fit increases employees' confidence in their ability to complete tasks and increases employee job satisfaction (Peng & Mao, 2015:810). This implies that when employees realise they possess the qualities and skills needed to achieve task success, they persevere to overcome difficulties and obstacles (Agholor, 2019:142).

Employees who have high self-efficacy display interest and commitment to achieving organisational outcomes (Agholor, 2019:142). A study by Hameli and Ordun (2022:76) found that self-efficacy is a significant mediator in the relationship between emotional intelligence and employees' organisational commitment. This implies that managerial interventions should consider employees' emotional intelligence, as this influences their self-efficacy and level of organisational commitment (Hameli & Ordun, 2022:87).

A study by Afzal *et al*. (2019:373) investigates self-efficacy as a mediator in the relationships between perceived supervisor support task performance and employee turnover intention, respectively. While perceived supervisor support has been found to significantly and positively correlate to task performance through self-efficacy, self-efficacy partially mediates this relationship (Afzal *et al*., 2019:376). Additionally, perceived supervisor support is significantly and negatively correlated to employee turnover intention and is fully mediated via self-efficacy. These findings imply that managers and supervisors play a crucial role in developing the self-efficacy of their subordinates and that managerial support aimed at improving employee self-efficacy can be used to improve performance and decrease staff turnover rates (Afzal *et al*., 2019:378).

2.8. Relationship between individual accountability, employee motivation and self-efficacy

Accountability is essential for societies and organisations to function effectively (Li *et al*., 2022:1). While formal mechanisms such as employment contracts and reporting systems are applied to enforce accountability, it is vital to understand the subjective experience of accountability to predict the impact of this construct on an individual's workplace outcomes (Han & Perry, 2020a:288) and behaviours.

Employee motivation, broadly categorised as intrinsic or extrinsic (Van den Broeck *et al*., 2016:1197), also influences workplace behaviours. Due to its positive association with aligning employee behaviours and actions with organisational goals (Delaney & Royal, 2017:128), there is extensive focus on the impact of employee motivation on constructs like employee and organisational performance (Lee & Raschke, 2016:162; Riyanto *et al*., 2021:162).

Research has found that individual accountability creates a sense of responsibility in employees for their tasks, which in turn influences their level of motivation (Waseem *et al*., 2021:448). According to Li *et al*. (2022:2), individual accountability is a form of integration of an employee with external organisational expectations and norms as associated with controlled forms of motivation in SDT. However, controlled forms of motivation are associated with employees feeling pressured to engage in behaviours and tasks due to factors such as recognition and esteem rather than their own volition (Pollack *et al*., 2020:316). This highlights the need for managers to employ accountability mechanisms appropriately to achieve the desired organisational results without negatively impacting the psychology of employees (Li *et al*., 2022:9).

To better understand the influence of individual accountability on employee motivation, it is crucial to consider the role of mediating variables in this relationship, such as self-efficacy. According to Rhee *et al*. (2017:1531), self-efficacy is negatively associated with high levels of formalisation in organisations, such as those associated with formal accountability mechanisms. This is because employees are less likely to feel a sense of personal empowerment regarding their work when policies and procedures are the primary source of individual accountability. However, the current viewpoint of many organisations is that some level of accountability is required to control behavioural outcomes (Han & Perry, 2020a:289). This is an important consideration, as research indicates that self-efficacy positively correlates to the intrinsic motivation of employees (Çetin & Aşkun, 2018:192). Hence, when organisations employ formal accountability tools to achieve targets, it must be understood that these mechanisms are tools to motivate employees to work proactively (Li *et al*., 2022:9).

2.9. Research gaps

Research on accountability remains in its early stages (Hall *et al*., 2017:204), and current research generally focuses on the macro-perspective of accountability (Han & Perry, 2020a:289). However, it is also essential to understand the micro-analytical perspective of individual accountability to predict its influence on individual employee outcomes (Han & Perry, 2020a:288). While research has linked individual accountability to positive work outcomes like extra-role behaviours (Kuo *et al*., 2022:1807) and task performance (Mero *et al*., 2014:1641), it has also been related to negative outcomes like emotional exhaustion (Li *et al*., 2022:8) and job tension (Hochwarter *et al*., 2014:369). This highlights that individual accountability is a complex construct (Hall *et al*., 2017:205) requiring in-depth insight to determine its influence on organisational and individual outcomes.

Existing research on the relationship between individual accountability and employee motivation remains limited. Motivation influences organisational performance (Riyanto *et al*., 2021:163) as it aids employees in working proactively and reacting appropriately to overcome obstacles (Delaney & Royal, 2017:129). Due to the impact of individual accountability and employee motivation on organisations, this study aims to address this research gap by establishing if there is a link between these constructs. To develop a deeper understanding of the influence of individual accountability and employee motivation, research is also required to consider the impact of mediating and moderating variables on accountability relationships (Hall & Ferris, 2011:144). As research indicates that self-efficacy positively correlates to motivation (Carter *et al*., 2018:2498; Çetin & Aşkun, 2018:192), this study explores the influence of self-efficacy as a mediator in the relationship between individual accountability and employee motivation.

2.10. Summary

Organisations consider accountability essential to maintaining and promoting employee performance and organisational efficacy (Li *et al*., 2022:1). To effectively evaluate the impact of accountability on workplace behaviours, external accountability mechanisms enforced by organisations are required to be linked to the individual perception of accountability (Han & Perry, 2020b:224), referred to as individual accountability.

Based on current research, individual accountability creates a feeling of responsibility in employees to achieve organisational targets, which positively correlates to their level of motivation (Waseem *et al*., 2021:448). However, individual accountability that stems from the high usage of formal accountability mechanisms is negatively associated with employee self-efficacy (Rhee *et al*., 2017:1531). Research has linked the self-efficacy beliefs of employees to motivation (Çetin & Aşkun, 2018:192). Hence, based on its source, individual accountability is positively or negatively correlated to employee motivation when considering self-efficacy as a mediator of this relationship.

CHAPTER 3 METHODOLOGY

3.1. Introduction

This study uses a selected South African steel organisation to investigate the connection between individual accountability and employee motivation. Additionally, the mediating role of employee self-efficacy in this relationship is explored. This chapter details the methodology used for this study. It includes information on the research philosophy, research methodology, respondents, sampling strategy, data collection procedure, measuring instruments used, techniques used for data analysis, limitations of this study and ethical considerations. This chapter concludes with a summary.

3.2. Research philosophy

Positivism is based on viewpoint that reality exists independently of an individual's perspective (Hirschsohn, 2021a:32). This allows reality to be measured using observation (Hirschsohn, 2021a:33). In this manner, research is unbiased, and the researcher remains objective and does not influence the findings of the study (Sefotho, 2021:9). The principles of positivism include that hypotheses are tested to determine the validity of the arguments that they are based on, data is gathered to develop universal propositions, and research is conducted objectively (Hirschsohn, 2021a:32).

In this study, the positivist research paradigm is applied as this research focuses on objectively testing the research questions and hypotheses related to individual accountability, employee motivation and self-efficacy. To achieve this, data was gathered using an online questionnaire (Hirschsohn, 2021a:32), in which respondents self-selected answers. This allows the researcher to remain detached during the data collection process of this study.

3.3. Research methodology

The methodological choice of a study refers to whether the data that is collected is non-numeric, numeric or a combination of the two (Saunders *et al*., 2023b:181-182). A single data collection technique and method of analysis is referred to as a mono-method (Saunders *et al*., 2023b:184). The methodological choice of this study is mono-quantitative. Quantitative research is associated with the positivism research philosophy (Saunders *et al*., 2023b:183) and is based on the deductive approach in which data is gathered and statistically analysed to test hypotheses (Hirschsohn, 2021a:32). To do this, data on the concepts of individual accountability (independent variable), employee motivation (dependent variable), and self-efficacy (mediator variable) has been collected using an online questionnaire.

3.4. Research design

The research design outlines the process used to collect and analyse data. The choice of research design depends on the research questions, hypotheses and the criteria that are used to assess the data, such as reliability, validity, authenticity and replicability (Faasen & Hirschsohn, 2021:99). Cross-sectional research design is used to collect data over a limited period and to examine the relationships between variables (Faasen & Hirschsohn, 2021:107). The time constraints placed on this study are by the NWU Business School.

A survey research strategy is a type of cross-sectional research design that uses questionnaires to collect data and is associated with the quantitative research methodology (Faasen & Hirschsohn, 2021:107; Saunders *et al*., 2023b:185). This study uses the survey research strategy because questionnaires allow data for empirical research on the attitudes and behaviours of respondents to be gathered directly (Lu *et al*., 2021:286). Furthermore, the survey research strategy is a simple and cost-effective method of obtaining data from many respondents (Saunders *et al*., 2023b:195)**.**

3.5. Participants

A sample population refers to a defined set of individuals selected for the study from the total population (Faasen, 2021:209). The sample population of this study consists of mid-to-senior management levels in a selected South African steel manufacturing company. This includes specialists and senior specialists in the organisation. These levels of management have been chosen as they are often directly responsible for ensuring employees' well-being and achieving organisational targets (Hall *et al*., 2017:214). Furthermore, these personnel must implement accountability mechanisms and ensure that reasonable punishments and boundaries are set when doing so (Li *et al*., 2022:9).

For relevant data to be collected from respondents, the researcher must specify the inclusion and exclusion criteria of the study. The inclusion criteria are characteristics that potential subjects must possess to be included in the survey (Yale University, 2024), such as age, years of employment or gender. The inclusion criteria of this study are that respondents are required to be permanent employees in a selected South African steel manufacturer with roles in the mid-to-senior management levels. While the relationship between job satisfaction and employee motivation is outside the scope of this study, research indicates that these two variables are interrelated (Jalagat, 2016:42). As temporary employees experience lower job satisfaction in comparison to permanent employees due to a lack of job security (Dawson *et al*., 2017:95), only permanent employees have been considered as potential respondents for this study.

Potential respondents may meet the inclusion criteria but have specific characteristics that disqualify them from the study (Yale University, 2024). This is referred to as the exclusion criteria of a study. For this study, respondents are excluded if they are employed by the organisation for less than six months or have a total working experience of less than three years. Employees with less than three years of working experience are typically part of the organisation's vocational training program, like candidate engineers or graduates-in-training. These employees, as well as personnel new to the organisation, are building relationships with peers, subordinates, and managers and are learning about the communication channels and accountability mechanisms, such as protocols and procedures used in the organisation.

3.6. Sampling strategy

In most research studies, the researcher cannot collect and analyse all the potential data available due to restricted access to subjects, cost, and time (Saunders *et al*., 2023c:289). Sampling involves selecting the relevant people and organisations to participate in the study to meet its constraints (Hirschsohn, 2021b:14). The two main sampling strategies are probability and non-probability sampling. The key differences between these types of sampling are summarised in Table 3-1.

Table 3-1: Summary of the main differences between probability and non-probability sampling

	Probability Sampling	**Non-probability Sampling**
Characterisation	Random sample selection minimises sampling error. The data is used to statistically generalise a study's target population.	The researcher uses their judgment when selecting a sample. Data is used to develop theoretical generalisations.
Sampling strategies	All types are random sampling strategies, including simple, systematic, stratified, and cluster.	Sampling strategies include quota, purposive, volunteer and haphazard.

(Adapted from sources: Faasen (2021:211); Saunders *et al*. (2023c:293)).

As an online questionnaire has been used for this study, non-probability sampling is used (Saunders *et al*., 2023c:295). Non-probability sampling involves the researcher applying their judgement so that some population members are more likely to be selected to participate in the study (Faasen, 2021:211). The non-probability sampling strategy that this study uses is purposive sampling. Purposive sampling allows the researcher to sample subjects that meet specific criteria or exemplify a relationship of interest for the study (Faasen, 2021:225). However, the limitation of using purposive sampling is that the findings of this study cannot be generalised to either the employees in the selected steel manufacturing company that have been excluded from this study or to the South African steelmaking industry (Faasen, 2021:224).

This study chooses subjects based on the inclusion and exclusion criteria. Subjects are required to be permanent employees in a selected South African steel manufacturer with roles in the mid-to-senior management levels. Based on the selected steel organisation's definition, this includes professionally qualified and experienced specialists. Subjects were excluded from this study if they were employed by the organisation for less than six months or have a total work experience of less than three years, like personnel who are part of the organisation's vocational training program. Based on these inclusion and exclusion criteria, 369 potential respondents were identified. The number of respondents required for this study to ensure that a representative sample is achieved is 84, based on guidelines provided by Strydom (2021:231) in Table 3-2.

Table 3-2: Research sampling guidelines

Population of study	**Suggested percentage of the population required for the study**	**Number of respondents**
50	64%	32
100	45%	45
200	32%	64
500	20%	100
1000	14%	140

(Adapted for source: Strydom (2021:231))

As this is a cross-sectional research study, 119 responses were received at the end of the data collection period.

3.7. Data collection methods

While data collection can occur in several ways, the method depends on several considerations, including time efficiency, response rates, and data capturing and cleaning (du Toit, 2021:238). Primary data collection involves collecting new data, while secondary data collection refers to the researcher identifying and analysing data collected by other researchers or organisations or publicly available on the internet (van Aardt, 2021:336). Primary data is collected through questionnaires, unstructured or structured interviews and focus groups. Secondary data sources include the internet, national and provincial government, non-government agencies, higher educational institutions, business media and newspapers (van Aardt, 2021:337-338).

This study uses a self-administered questionnaire on an online platform to collect primary data. The online platform chosen is Microsoft Forms, a free tool that encrypts data as a security measure. It is easily accessible to the potential respondents. A self-administered questionnaire is used as it allows respondents to answer at their own pace for a given period, prevents interviewer variability and is time efficient (du Toit, 2021:239). The link to the questionnaire has been communicated via email to the potential respondents who meet the study requirements by a representative of the selected organisation's human resources (HR) department. For this study, the chosen gatekeeper is the HR consultant responsible for the researcher's department. Based on the number of responses that are received, a reminder has been sent by the HR consultant once per week. By the end of the chosen data collection period, 119 responses have been obtained from the sample population of 369 potential respondents.

3.8. Measuring instruments

The characteristics of potential respondents influence the choice of questionnaire used in a study, the importance of responses not being contaminated, the likely response rate, and the number of questions needed to collect the relevant data (Saunders *et al*., 2023a:510).

Demographic information: Sections 12 and 13 of the Protection of Personal Information Act 4 of 2013 require that all personal information is collected directly from the subject with their consent and is done so for a specific and lawful purpose. Demographic data is limited to age, gender, work experience, tenure, and organisational role. This data is used to evaluate which groups are represented in the study from the sample population to understand the profile of respondents and is not used for statistical purposes in this study.

Individual accountability: Data is collected using an existing measure, the Individual Accountability in Organizations Scale (IAOS) developed by Frink *et al*. (2018:2). This multidimensional instrument measures “Intensity,” “Focus,” and “Salience.” This scale has been chosen because it has been tested for both reliability and validity (Frink *et al*., 2018:18-19).

Employee motivation is measured using the Multi-dimensional Work Motivation Scale (MWMS) questionnaire developed by Gagné *et al.* (2015:179). Based on SDT (Gagné *et al*., 2015:178), this instrument measures the dimensions of “Extrinsic Regulation”, “Introjected Regulation”, “Identified Regulation”, “Intrinsic Motivation”, and “Amotivation”. This instrument is chosen as it has been used in previous motivational research (Howard *et al*., 2016:78; Jungert *et al*., 2018:13), is focused on the work domain, and has been tested for reliability and validity (Gagné *et al*., 2015:190).

Self-efficacy is measured using the unidimensional New General Self-Efficacy Scale (NGSE) developed by Chen *et al.* (2001:62). This instrument consists of eight items which are answered using a 5-point Likert scale. This study explores the impact of self-efficacy as a mediator variable in the relationship between individual accountability and employee motivation. As it has been suggested that the NGSE can explain employee motivation in various workplace settings (Chen *et al*., 2001:77), this study has chosen to use this instrument.

3.9. Reliability, validity and trustworthiness of measuring instruments

The reliability and validity of measuring instruments like questionnaires are crucial for quantitative research (van Aardt & Hirschsohn, 2021:53). A valid questionnaire allows accurate data related to the concepts being studied to be collected. In contrast, a reliable questionnaire allows for consistent data collection (Saunders *et al*., 2023a:520).

For multiple-indicator measuring instruments, the internal reliability is tested to ensure that all the indicators are related to each other (van Aardt & Hirschsohn, 2021:54). Cronbach’s alpha (α) is used to test internal reliability. α is between 0 and 1. Validity deals with whether a set of indicators measures the intended concept (van Aardt & Hirschsohn, 2021:55). The validity of a measuring tool is established using internal validity, face validity, concurrent validity, predictive validity, construct validity, convergent validity, and discriminant validity. If a measuring tool lacks internal reliability, it is measuring different ideas instead of the concept of interest and cannot be valid (van Aardt & Hirschsohn, 2021:56).

The measuring instruments that are used in this study are reliable and valid. The Individual Accountability in Organizations Scale (IAOS) developed by Frink *et al.* (2018:23) displays convergent and discriminant validity. This implies that the IAOS successfully measures the individual accountability of employees (Roestenburg, 2021:203). To test this, the study uses correlation analysis to evaluate if respondents' perceptions of individual accountability differ from related but distinct constructs. The values of the correlations of the constructs that are significant at the 0.01 level are (Frink *et al.*,2018:18-19):

- work performance accountability= .39
- dispositional accountability= .65
- political skill= .52
- core self-evaluations= .46
- conscientiousness= .43
- agreeableness= .23
- state anxiety= -.41
- trait anxiety= -.51
- negative affect= -.44

The Cronbach's alpha values for the IAOS and its factors are (Frink *et al.*,2018:32-34):

- Overall scale: α= .86
- Intensity dimension: α= .81 (Study 1), α= .78 (Study 2)
- Focus dimension: α= .84 (Study 1), α= .81 (Study 2)
- Salience dimension: α= .87 (Study 1), α= .76 (Study 2)

The Multidimensional Work Motivation Scale (MWMS) in the English culture and language has Cronbach's alphas that are found to be as follows (Gagné *et al*., 2015:186):

- Intrinsic: α= .90
- Identified: α= .75
- Introjected: α= .70
- Extrinsic motivation: α= .76
- Amotivation: α= .79

Tests for convergent and discriminant validity indicate that basic psychological needs (autonomy, competence, and relatedness) are predictably associated with various forms of motivation (Gagné *et al*., 2015:178). The findings of the correlation analysis of the MWMS in English are summarised in Table 3-3.

Table 3-3: Correlations between forms of motivation and basic psychological needs

Variable	Amotivation	External Regulation	Introjected Regulation (Partial *r*)	Identified Regulation	Intrinsic Motivation
Need for autonomy	-.29*	-.13	-.19*	.07	0.37**
Need for competence	-.31*	-.13	-.17*	.13	.29*
Need for relatedness	-.12	-.15	-.17*	.05	.35**
**p<0.05* ***p<0.01*					

(Adapted from source: Gagné *et al*. (2015:189))

The Cronbach's alpha values for the reliability of the New General Self-Efficacy Scale (NGSE) developed by Chen *et al*. (2001:72) are α= = .86 (Time 1) and α= .90 (Time 2). The Cronbach's alphas for this unidimensional scale, in conjunction with the shorter number of items, make it an appealing option for self-efficacy research. To evaluate the content validity of the NGSE, two independent panels have been requested to identify the number of items on the scale that they perceive to correspond to the definition of general self-efficacy. The findings of this study indicate that 98 percent of the scale items have been identified as measuring general self-efficacy (Chen *et al*. 2001:69).

The reliability of the measuring tools used for this study has been summarised in Table 3-4.

Table 3-4: Reliability of scales and factors

Scales	Factor	Reliability (Cronbach's Alpha)	References
Individual Accountability in Organizations Scale (IAOS)	Overall Scale	.86	(Frink *et al*., 2018: 32-34)
	Intensity	.78-.81	
	Focus	.81-.84	
	Salience	.76-.87	
Multidimensional Work Motivation Scale (MWMS)	Intrinsic Motivation	.90	(Gagné *et al*., 2015:186)
	Identified Motivation	.75	
	Introjected Motivation	.70	
	Extrinsic Motivation	.76	
	Amotivation	.79	
New General Self-Efficacy Scale (NGSE)	Overall Scale	.86-.90	(Chen *et al*., 2001:72)

3.10. Data analysis

Data analysis is required to process data into a form that is easy to understand and interpret so that the relationship between variables can be studied and tested and conclusions can be drawn (Bartley & Hashemi, 2021:250). The computation of the statistical analysis for this study has been done using Microsoft Excel (MS Excel). This analysis consists of descriptive statistics to calculate the demographics' total, mean, and standard deviation, employee motivation, individual accountability, and respondents' self-efficacy. Cronbach's alpha (α) has been used to measure the reliability of the data collected during this study.

Regression analysis, with individual accountability as the independent variable and employee motivation as the dependent variable, was used to test the first hypotheses (H0,1 vs. H1). Regression analysis provides insight into the extent to which changes in the independent variable affect the dependent variable (Bowerman *et al*., 2015:1-2). Hence, regression has been used to explore the association and causation relationship between individual accountability and employee motivation (Bartley & Hashemi, 2021:256-257).

The second hypothesis ($H_{0,2}$ vs. H_2) is tested using a mediation analysis. This involves testing whether the relationship between individual accountability (independent variable) and employee motivation (dependent variable) is indirect and mediated by self-efficacy (mediating variable). This study used the mediation analysis method proposed by Baron and Kenny (1986:1176-1177), as illustrated in Figure 3-1.

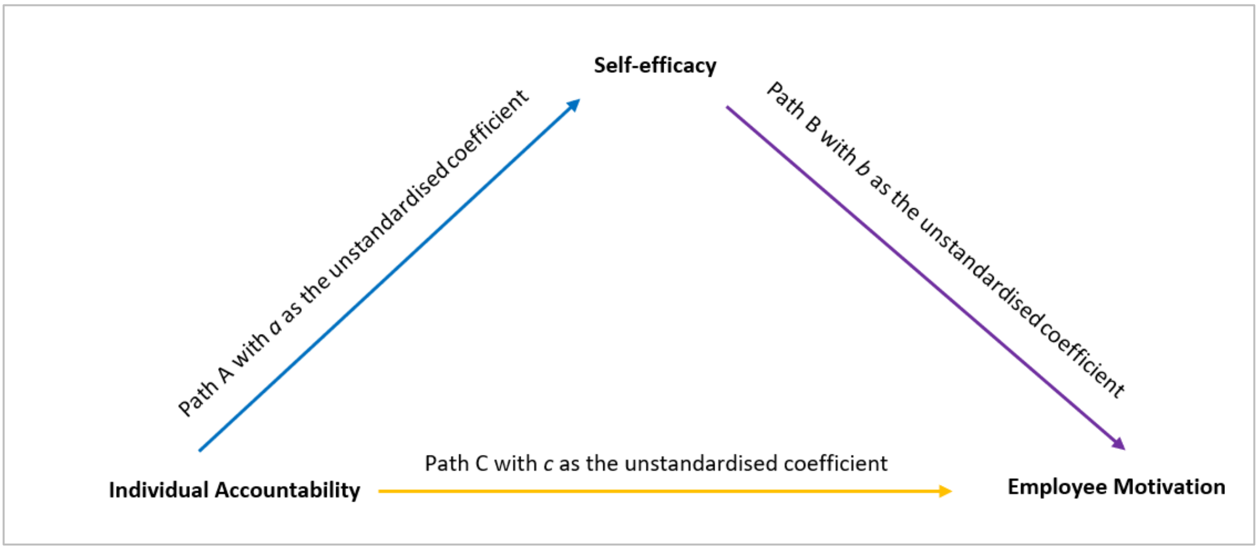

Figure 3-1: Mediator analysis that is used in this study (Baron & Kenny, 1986:1176)

This process involves first regressing self-efficacy on individual accountability (Path A). Next, employee motivation is regressed on individual accountability (Path C). This direct path analysis was also applied to test the first hypotheses. In the third step, employee motivation is regressed on individual accountability and self-efficacy (Path B). Lastly, Baron and Kenny (1986:1177) recommend that a Sobel test be performed to determine the significance of the overall indirect path (Path A and B). Note that the Sobel test assumes that the product coefficients of Path A and Path B are normal (Peng & Mao, 2015:809).

Although the method suggested by Barron and Kenny (1986:1177) remains acceptable for mediation analysis, it is generally considered to be not as robust as modern analytical techniques like structured equation modelling (SEM) (Zhao *et al*., 2010:205) or boot-strapping. However, research indicates that alternative mediation analysis tests such as bootstrapping are more likely to agree with the Baron and Kenny (1986:1177) method regardless of the sample size (Hayes & Scharkow, 2013:1924).

3.11. Ethical considerations

The two main ethical concerns associated with conducting research with human respondents are covertly conducting research and harming the subjects (Saunders *et al*., 2023b:213). To prevent this, firstly, formal permission from the chosen steel organisation's Chief Human Resources Officer (CHRO) has been granted to allow access to its employees to participate in this study. Secondly, the data collection instruments have been evaluated and approved by the NWU Research Ethics Review Committee (REC) to determine the risk to potential respondents and if the mitigation that is used is sufficient. Thirdly, a requirement for the respondents to provide their informed consent has been added to the introduction to the questionnaire. This introductory section notifies respondents of the following (National Health Research Ethics Council, 2014):

- The purpose for which data are collected and how it is used.
- Information on compensation and other incentives for participation in this study.
- The institution through which this study is performed and the lead researchers with access to the data responsible for its management.
- Participation is voluntary, and at any time during the study, respondents may withdraw their participation without any consequences.

To ensure that anonymity is maintained, identifying information such as names or contact details of respondents has not been asked for. Demographic information is limited to age, gender, work experience, tenure, and organisational role. As required by Sections 10, 12 and 13 of the

Protection of Personal Information Act 4 of 2013, personal information collected from respondents limited to what is needed for this study is collected directly from the respondents and is used for lawful purposes. Annexure B contains the NWU's ethical approval letter for this study.

Additionally, as this study uses existing measuring instruments for data collection, approval from the respective authors has been received (refer to Annexure A and Annexure C).

3.12. Summary

This chapter details the process used to collect and analyse primary quantitative data required for this study. Data are collected using a self-administered online questionnaire. Demographic information collected is limited to what is needed for the study, does not include any identifying information, and is used to evaluate which groups are represented in the study from the sample population. Data on individual accountability, employee motivation and self-efficacy has been collected using the measuring instruments Individual Accountability in Organizations Scale (IAOS), Multidimensional Work Motivation Scale (MWMS) and New General Self-Efficacy Scale (NGSE), respectively. Each measuring instrument is reliable and valid.

Data collected are analysed to determine if there is a direct relationship between individual accountability (independent variable) and employee motivation (dependent variable). Furthermore, mediation analysis is used to determine if the relationship between individual accountability (independent variable) and employee motivation (dependent variable) is indirect and mediated by self-efficacy (mediating variable).

CHAPTER 4 RESULTS AND ANALYSIS

4.1. Introduction

This study uses a selected South African steel organisation to explore the link between individual accountability and employee motivation. It also examines the mediating role of employee self-efficacy in this relationship. This chapter presents the results of the data that have been collected and analysed as described in Chapter 3.

4.2. Demographics of the respondents

Demographic data collected is used to understand respondents' profiles. This information is limited to age, gender, total years of work experience, tenure within the organisation, and organisational role.

4.2.1. Age

The age distribution of the respondents of this study is illustrated in Figure 4-1. The majority of the respondents that participated in this study are between 45-54 years old (35.3 percent or 42 responses) followed by respondents in the age categories of 55-64 years old (31.1 percent or 37 responses) and 35-44 years old (22.7 percent or 27 responses).

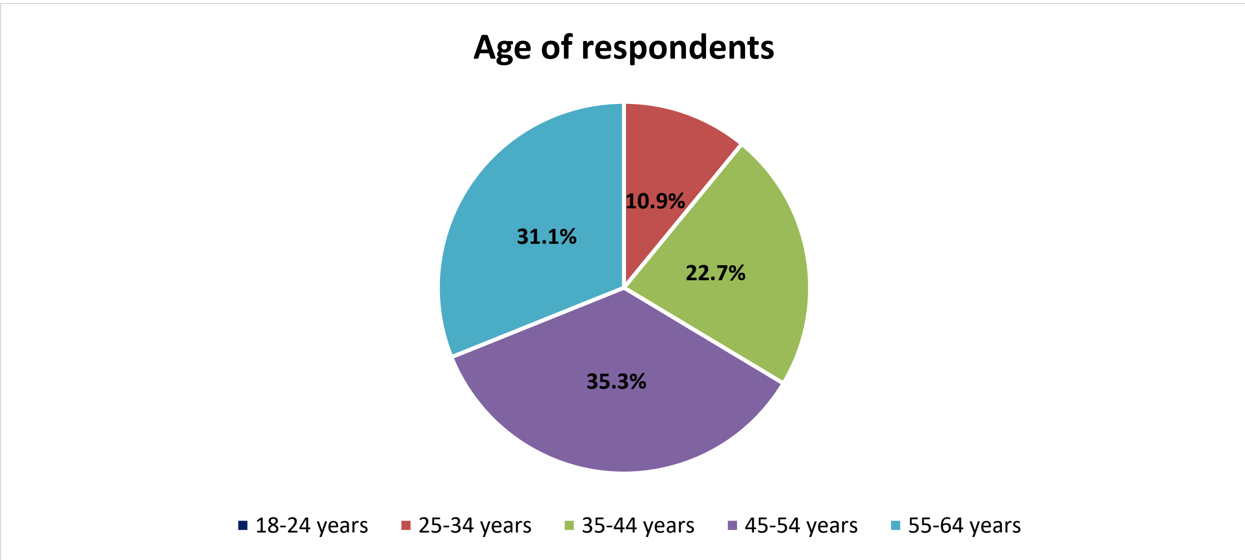

Figure 4-1: Age distribution of respondents

The age distribution of respondents is partly attributed to the exclusion criteria of the study as employees have been excluded if they have a total working experience of less than three years. These employees fall in the 18-24 years age category and are typically part of the organisation's vocational training programmes.

4.2.2. Gender

The gender of the respondents is displayed in Figure 4-2. More males participated in this study (67.2 percent or 80 responses) in comparison to females (32.8 percent or 39 responses).

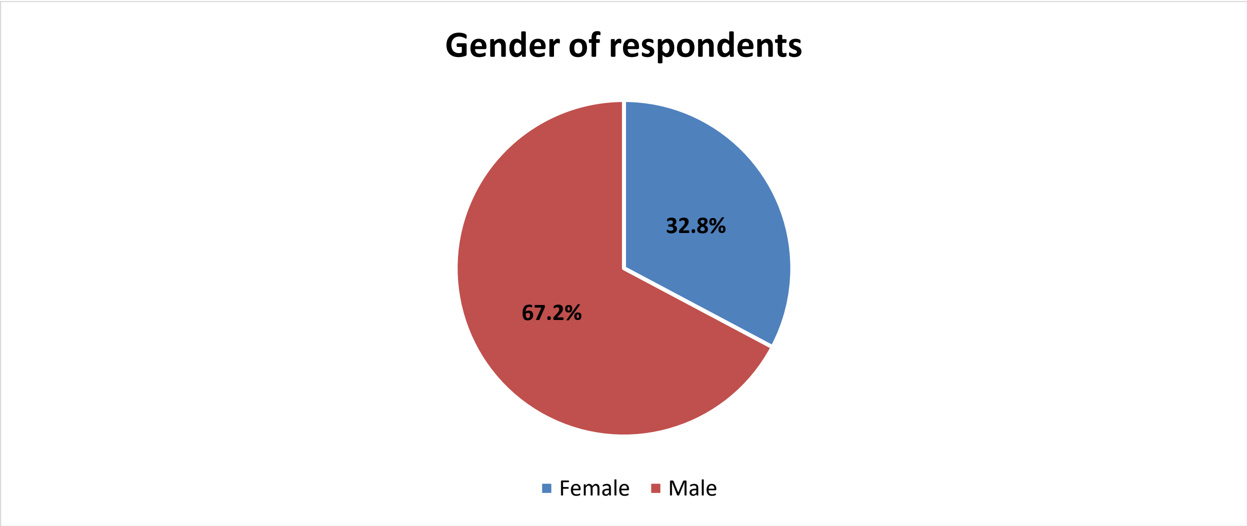

Figure 4-2: Gender distribution of respondents

4.2.3. Total years of work experience

Employees with work experience are invaluable assets to an organisation. They have the skills, knowledge, and training to perform their jobs proficiently and have professional networks that an organisation can leverage (Indeed, 2024a). Figure 4-3 indicates the distribution of the respondents' work experience.

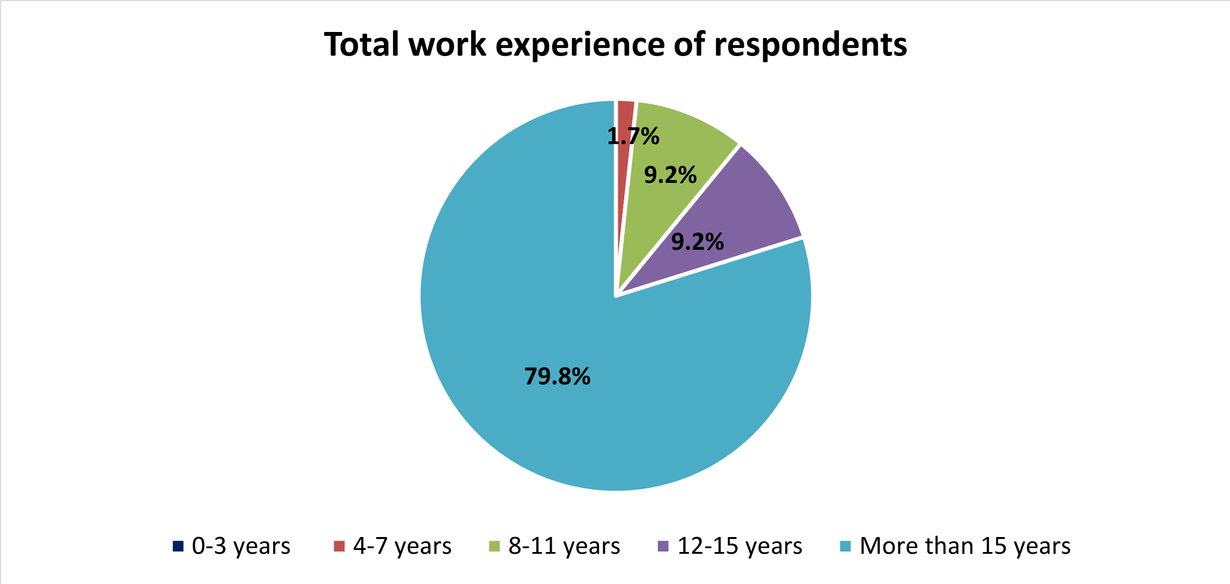

Figure 4-3: Overall work experience of respondents

The total work experience of respondents is found to be 79.8 percent (95 responses) for more than 15 years, 9.2 percent (11 responses) for 12-15 years, 9.2 percent (11 responses) for 8-11 years, and 1.7 percent (2 responses) for 4-7 years. Note that none of the respondents have less than three years of work experience, and this category has been included in the questionnaire to ensure that the exclusion criteria are met.

4.2.4. Tenure in the organisation

The tenure of respondents is displayed in Figure 4-4. Most employees have a tenure with the steel organisation of eight years or greater with 15.1 percent (18 responses) having a tenure between 8-11 years, 11.8 percent (14 responses) between 12-15 years and 57.9 percent (69 responses) with more than 15 years of service. Note that none of the respondents have less than six months tenure, and this category has been included in the questionnaire to ensure that the exclusion criteria have been met.

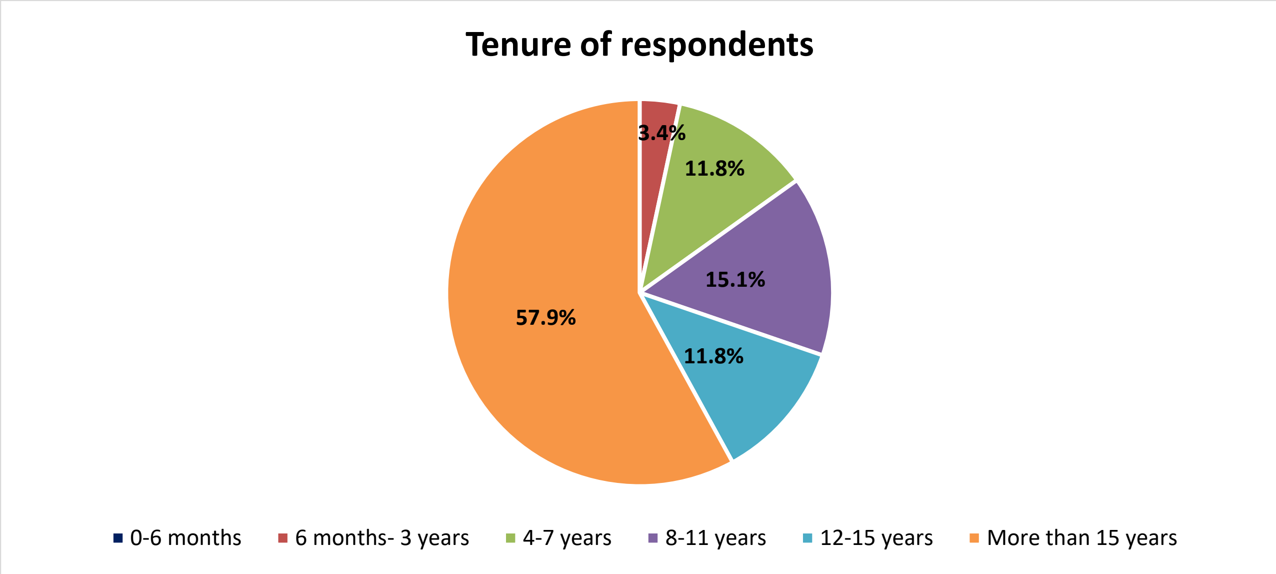

Figure 4-4: Tenure of respondents within the chosen steel organisation

4.2.5. Organisational role

Figure 4-5 indicates the organisational role of respondents.

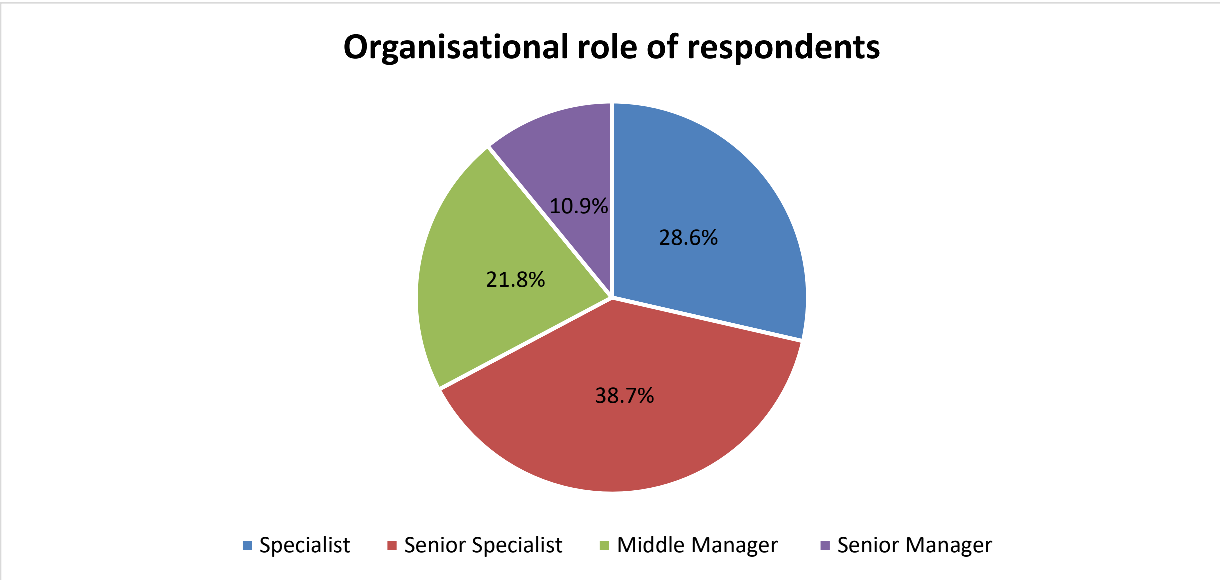

Figure 4-5: Respondents role in the steel organisation

The various respondents' organisational roles are 38.7 percent (46 responses) senior specialists, 28.6 percent (34 responses) specialists, 21.8 percent (26 responses) middle managers, and 10.9

percent (13 responses) senior managers. Based on the organisation's definition, the senior specialists and specialists' categories include a wide range of professionally qualified and experienced employees.

4.3. Descriptive statistics and reliability of measuring instruments

4.3.1. Descriptive statistics of the constructs

The individual accountability of employees has been measured using the Individual Accountability in Organizations Scale (IAOS) developed by Frink *et al.* (2018:2). This is a multi-dimensional instrument that measures "Intensity", "Focus", and "Salience" and the findings for this study are summarised in Table 4-1.

Table 4-1: Descriptive statistics of individual accountability

Dimensions	Minimum	Maximum	Mean (Mn)	Standard Deviation (SD)
Intensity	**1.00**	**7.00**	**5.76**	**1.33**
Intensity 1	1.00	7.00	5.97	1.19
Intensity	2.00	7.00	6.05	1.12
Intensity 3	2.00	7.00	5.50	1.47
Intensity 4	1.00	7.00	5.50	1.44
Focus	**1.00**	**7.00**	**6.31**	**0.89**
Focus 1	3.00	7.00	6.45	0.65
Focus 2	5.00	7.00	6.49	0.53
Focus 3	1.00	7.00	6.09	1.03
Focus 4	1.00	7.00	6.46	0.87
Focus 5	1.00	7.00	6.05	1.12
Salience	**2.00**	**7.00**	**6.11**	**0.98**
Salience 1	2.00	7.00	6.21	1.00
Salience 2	2.00	7.00	6.18	1.06
Salience 3	4.00	7.00	6.21	0.76
Salience 4	3.00	7.00	5.85	1.02
IAOS	**1.00**	**7.00**	**6.08**	**1.09**

The data indicate that the respondents rated themselves high on the IAOS with the mean values for the factors ranging from 5.78 to 6.11 and the overall scale at 6.08. Respondents scored the highest for the dimension of "Focus" (Mn= 6.31 and SD= 0.89), which indicates that they strongly consider themselves to be accountable for achieving their task outcomes, quality of work and displaying appropriate workplace behaviours (Frink *et al*., 2018:8). Respondents also scored high on "Salience" (Mn= 6.11 and SD= 0.98) which indicates that respondents consider themselves to be accountable for important tasks and projects that influence the overall performance of the organisation (Frink *et al*., 2018:31). The lowest scores are for "Intensity" (Mn= 5.76 and SD= 1.33), which indicate that respondents consider themselves to be accountable to various people within the organisation for different outcomes and deliverables (Frink *et al*., 2018:8).

Employee motivation has been measured using the Multi-dimensional Work Motivation Scale (MWMS) questionnaire developed by Gagné *et al.* (2015:179). This scale measures the dimensions of "Extrinsic Regulation", "Introjected Regulation", "Identified Regulation", "Intrinsic Motivation", and "Amotivation". The results of the use of the scale in this study are summarised in Table 4-2.

Table 4-2: Descriptive statistics of employee motivation

Dimension	Min	Max	Mean (Mn)	Standard Deviation (SD)
Amotivation	**1.00**	**7.00**	**1.59**	**1.17**
AM1	1.00	7.00	1.94	1.48
AM2	1.00	6.00	1.42	0.95
AM3	1.00	6.00	1.40	0.92
Extrinsic Regulation-Social	**1.00**	**7.00**	**1.97**	**1.47**
Ext-Soc1	1.00	7.00	1.97	1.47
Ext-Soc2	1.00	7.00	2.04	1.56
Ext-Soc3	1.00	7.00	1.89	1.39
Extrinsic Regulation-Material	**1.00**	**7.00**	**2.51**	**1.76**
Ext-Mat1	1.00	7.00	2.08	1.42
Ext-Mat2	1.00	7.00	2.39	1.68
Ext-Mat3	1.00	7.00	3.07	1.99
Introjected Regulation	**1.00**	**7.00**	**4.48**	**2.07**
Introj1	1.00	7.00	4.18	2.18
Introj2	1.00	7.00	5.51	1.48
Introj3	1.00	7.00	4.05	2.15
Introj4	1.00	7.00	4.20	2.07
Identified Regulation	**1.00**	**7.00**	**6.07**	**1.09**
Ident1	3.00	7.00	6.16	0.97
Ident2	4.00	7.00	6.18	0.94
Ident3	1.00	7.00	5.86	1.30
Intrinsic Motivation	**1.00**	**7.00**	**4.97**	**1.54**
Intrin1	1.00	7.00	4.73	1.64
Intrin2	1.00	7.00	4.92	1.54
Intrin3	1.00	7.00	5.24	1.40

The data indicate that there is variation among the different dimensions of the MWMS, with respondents rating themselves as the highest for the “Identified Regulation” dimension (Mn= 6.07 and SD= 1.09). Respondents also rated higher for the “Intrinsic Motivation” dimension (Mn= 4.97 and SD= 1.54). The lowest score is for the “Amotivation” dimension (Mn= 1.59 and SD= 1.17), which indicates that respondents do not lack motivation when performing their work-related tasks (Gagné *et al*., 2015:179).

Employee self-efficacy is measured using the unidimensional New General Self-Efficacy Scale (NGSE) developed by Chen *et al.* (2001:62). The results of this study when using the NGSE are listed in Table 4-3.

Table 4-3: Descriptive statistics for self-efficacy

Factor	Min	Max	Mean (Mn)	Standard Deviation (SD)
GSE1	1.00	5.00	4.09	0.71
GSE2	1.00	5.00	4.18	0.62
GSE3	1.00	5.00	4.22	0.69
GSE4	1.00	5.00	4.29	0.64
GSE5	1.00	5.00	4.25	0.60
GSE6	1.00	5.00	4.22	0.61
GSE7	1.00	5.00	4.02	0.70
GSE8	1.00	5.00	4.19	0.63
NGSE	1.00	5.00	4.18	0.66

Respondents consistently scored high on the NGSE (Mn= 4.18 and SD=0.66). In particular, respondents consider it possible to successfully achieve the outcomes they put effort towards (GSE 4: Mn= 4.29 and SD= 0.64) and can overcome workplace challenges (GSE 5: MN= 4.25 and SD= 0.60).

4.3.2. Reliability of the scales used in this study

Scale reliability occurs when the instrument consistently measures the same indicator and provides similar outcomes (Roestenburg, 2021:206). Cronbach’s alpha is used as a test of internal reliability for multiple-indicator measures to ensure that all the indicators or dimensions that are used to measure a concept are related to each other and the core concept (van Aardt & Hirschsohn, 2021:54). Cronbach’s alpha ranges from between 0 (which denotes no internal reliability of an instrument) to 1 (which signifies perfect internal reliability of an instrument) (Roestenburg, 2021:206). According to Ursachi *et al*. (2015:681), Cronbach’s alpha values between 0.6 and 0.95 are regarded as acceptable levels of reliability.

For this study, three scales were used: IAOS to measure individual accountability, MWMS to measure employee motivation, and NGSE to measure employee self-efficacy. Table 4-4 lists the Cronbach's alpha of each of the overall scales and the factors or dimensions of each scale.

Table 4-4: Internal reliability of the overall scales and their factors that are used in this study

Scale and dimensions	Number of Items	Cronbach's Alpha
IAOS	**13**	**0.82**
Intensity	4	0.76
Focus	5	0.77
Salience	4	0.80
MWMS	**19**	**0.80**
Amotivation	3	0.61
Extrinsic Regulation- Social	3	0.85
Extrinsic Regulation- Material	3	0.77
Introjected Regulation	4	0.82
Identified Regulation	3	0.86
Intrinsic Motivation	3	0.92
NGSE	**8**	**0.91**

The IAOS consists of three dimensions, which are "Intensity", "Focus", and "Salience", and 13 items (Frink *et al*., 2018:31). The "Intensity" dimension is a measure of the extent to which employees are accountable to multiple parties for different things while the "Focus" dimension measures the degree to which employees are accountable for organisational outcomes, quality of work and acceptable workplace behaviours (Frink *et al*., 2018:8). The "Salience" dimension measures the level to which employees are accountable for high-priority organisational tasks and projects (Frink *et al*., 2018:8-9). Cronbach's alpha for the IAOS is calculated as 0.82 which signifies that the overall scale has high internal reliability. The "Salience" dimension has Cronbach's alpha of 0.8 which denotes high internal reliability. The dimensions of "Intensity" and "Focus" have Cronbach's alphas of 0.76 and 0.77, respectively, which signifies an acceptable level of internal reliability.

The MWMS measures the dimensions of "Extrinsic Regulation- Social", "Extrinsic Regulation-Material", "Introjected Regulation", "Identified Regulation", "Intrinsic Motivation", and "Amotivation" (Gagné *et al*., 2015:196) using a 19-item scale. The "Amotivation" dimension measures the absence of any form of motivation towards a task or action whereas the dimension of "Introjected Regulation" refers to motivation that arises from internal forces within the employee like ego, shame and guilt (Gagné *et al*., 2015:179). The "Identified Regulation" dimension measures the motivation employees have to put effort into tasks that are perceived to be important due to these outcomes having personal significance while "Intrinsic Motivation" measures motivation arising from employees' enjoyment of performing a work-related task or activity (Gagné *et al*., 2015:179). The dimension of "Extrinsic Regulation- Social" measures motivation of employees to engage in behaviours and tasks to gain others' approval and respect while the "Extrinsic Regulation-Material" dimension measures motivation of employees to undertake work for personal gain such as financial rewards and job security (Gagné *et al*., 2015:196). Cronbach's alpha of the overall MWMS is 0.8 which denotes high internal reliability. Cronbach's alpha is also found to indicate high internal reliability for the dimensions of Introjected Regulation" (0.82), "Extrinsic Regulation-Social" (0.85), "Identified Regulation" (0.86) and "Intrinsic Motivation" (0.92). Cronbach's alpha for "Extrinsic Regulation- Material" is 0.77 which signifies acceptable internal reliability. Cronbach's alpha for "Amotivation" is found to be 0.61 which denotes lower internal reliability of this dimension in comparison to the other dimensions on the MWMS.

The NGSE scale is an unidimensional measure of employee self-efficacy consisting of eight elements. The NGSE is used to measure an employee's perception of his/her ability to successfully perform tasks and activities in the workplace given a variety of situations (Chen *et al*., 2001:79). As Cronbach's alpha is 0.92, which denotes high internal reliability of the NGSE.

4.4. The influence of individual accountability on employee motivation

Regression has been used to explore the association and causation between individual accountability as an independent variable and employee motivation as a dependent variable (Bartley & Hashemi, 2021:256-257). Association assesses if the position of the dependent variable is consistently associated with that of the independent variable while causation establishes if there is a relationship between the variables. The results of the regression analysis are summarised in Table 4-5.

Table 4-5: Regression analysis for assessing the influence of individual accountability on employee motivation

Predictor	**β**	**Standard Error**	***t***	***p***	**95% CI**
Intercept (Constant)	2.78	0.63	4.41	<0.001	[1.53, 4.02]
Individual Accountability	0.14	0.10	1.31	0.194	[-0.07, 0.34]

The coefficient β denotes the change in the standard deviation of the independent variable that occurs with each unit change in the standard deviation of the independent variable when all other variables are held constant (Bartley & Hashemi, 2021:277). The results of this study indicate a β of 0.14 exists with a 95 percent confidence interval (CI) between -0.07 and 0.34. This indicates a modest positive mean response in employee motivation occurs with a unit change in the standard deviation of individual accountability. The *p*-value is the probability of the data for a variable occurring by chance rather than from the influence of the independent variable and is measured at a 0.05 level of significance (Bartley & Hashemi, 2021:254). The *p* for the relationship between individual accountability and employee motivation exceeds the 0.05 level of significance (p= 0.194) in this study. This denotes that a statistically significant relationship does not exist between individual accountability and employee motivation.

Table 4-6 provides a model summary of the regression analysis performed to determine the relationship between individual accountability and employee motivation.

Table 4-6: Model summary of the regression analysis performed for individual accountability and employee motivation

Statistical Analysis of the Model	
R^2	0.014
F	1.71

The coefficient of determination (R^2) is low at 0.014. This indicates that 1.4 percent of the variation in employee motivation is explained by the variation of individual accountability. The F ratio is used to determine whether the differences between group means are bigger than the differences for a single group (Bartley & Hashemi, 2021:282). The F ratio for the relationship between individual accountability and employee motivation is not large at 1.71 which implies that the null hypothesis ($H_{0,1}$) can be accepted.

4.5. The mediator role of employee self-efficacy in the relationship between individual accountability and employee motivation

Mediation analysis has been conducted to explore whether self-efficacy is a mediator variable in the connection between individual accountability and employee motivation. This has been done using regression analysis and the method proposed by Baron and Kenny (1986:1176-1177). This process first involves regressing the self-efficacy on individual accountability (Path A), then regressing employee motivation (Path C). Next, employee motivation is regressed on individual accountability and self-efficacy (Path B). The results of the regression analysis done for each path are summarised in Table 4-7.

Table 4-7: Regression analysis to evaluate self-efficacy as a mediator of the relationship between individual accountability and employee motivation

Path	Predictor	β	Standard Error	*t*	*p*	95% CI
Path A	*Mediator variable: self-efficacy*					
	Intercept (Constant)	2.53	0.46	5.55	<0.001	[1.62, 3.43]
	Individual Accountability	0.27	0.075	3.65	<0.001**	[0.13, 0.42]
Path C	*Dependent variable: employee motivation*					
	Intercept (Constant)	2.78	0.63	4.41	<0.001	[1.53, 4.02]
	Individual Accountability	0.14	0.10	1.31	0.194	[-0.07, 0.34]
Path B	*Dependent variable: employee motivation*					
	Intercept (Constant)	2.12	0.68	3.12	0.002	[0.78, 3.47]
	Self-Efficacy	0.37	0.13	2.89	0.005**	[0.12, 0.63]
	Individual Accountability	-0.01	0.11	-0.12	0.905	[-0.23, 0.20]
***p<0.05*						

Baron and Kenny (1986:1177) recommend performing a Sobel test to determine the significance of the indirect path (Path A and B) (Table 4-8).

Table 4-8: Sobel test for confirming self-efficacy mediates the link between individual accountability and employee motivation

Test Statistic (z)	Standard Error	***P***
2.26	0.0449	*0.025***
***p<0.05*		

The results indicate that in the relationship between individual accountability and self-efficacy (Path A), β of 0.27 exists with a 95 percent CI between 0.13 and 0.42. This indicates that there is a modest positive response between individual accountability and self-efficacy. The p <0.001 is below the significance level of 0.05, which denotes that a significant statistical relationship exists between individual accountability and employee motivation.

These findings study also indicate that in the relationship between self-efficacy and employee motivation (Path B) β of 0.37 exists with a 95 percent CI between 0.12 and 0.63. This indicates a moderate positive effect exists between self-efficacy and employee motivation occurs. The p=0.005 is below the significance level of 0.05, which indicates that a significant statistical relationship exists between self-efficacy and employee motivation. However, in this relationship individual accountability does not have a statistically significant relationship with employee motivation as the p of 0.905 is above the significance level of 0.05 at a 95 percent CI between -0.23 and 0.20. Furthermore, the results of the Sobel test indicate that z is 2.26 with a p of 0.025. This implies that the Path B containing self-efficacy as a mediator has a statistically significant influence on the relationship between individual accountability and employee motivation.

Table 4-9 provides a summary of the models used for the regression analysis performed on each path to determine the relationship between individual accountability and employee motivation.

Table 4-9: Model summary of the regression analysis performed for each path

Statistical Analysis of the Model	
Path A: Individual Accountability→ Self-efficacy	
R^2	0.102
F	13.36
Path C: Individual Accountability→ Employee Motivation	
R^2	0.014
F	1.71
Path B: Individual Accountability→ Self-efficacy→ Employee Motivation	
R^2	0.077
F	4.83

For Path A, the R^2 is at 0.102. This indicates that 10.2 percent of the variation in self-efficacy is accounted for through individual accountability. For Path B, the R^2 is 0.077, which indicates that 7.7 percent of the variation in employee motivation is accounted for through self-efficacy as a mediator variable. The F ratio of Path A is 13.36 and 4.83 for Path B. This indicates that null hypothesis ($H_{0,2}$) cannot be accepted.

4.6. Summary

This chapter focuses on the results obtained from analysing data that has been collected as part of this study as well as an interpretation. Demographic information related to age, gender, total working experience, tenure and organisational has been used to determine the profile of the respondents. Data on the variables of this study have been collected using the IAOS as a measure of individual accountability, MWMS for employee motivation and NGSE for employee self-efficacy. Linear regression was performed to determine the connection between individual accountability and employee motivation. Results indicate that a modest relationship that is not statistically significant exists between individual accountability and employee motivation ($\beta = 0.14$ and $p=0.194$). However, a modest positive relationship that is statistically significant exists between individual accountability and self-efficacy ($\beta=0.27$ and $p < 0.001$). In contrast, a moderately positive and statistically significant relationship exists between self-efficacy and employee motivation (β of 0.37 and $p=0.005$).

CHAPTER 5 DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.1. Introduction

This chapter discusses the findings and associated managerial implications based on this study's results. Furthermore, recommendations are provided for future research opportunities.

5.2. Discussion on the demographics of the respondents

Demographic data collected is used to understand the profile of respondents and is limited to age, gender, total number of years of work experience, tenure within the organisation and organisational role. This profile indicates that 66.4 percent of respondents are between the ages of 45 and 64 years old while 22.7 percent are between 35-44 years old. This may be partly attributed to the study's exclusion criteria, which did not allow younger employees with a total working experience of less than three years to participate. However, as of quarter three of 2023, 43.4 percent of South Africans 34 years old and younger remain unemployed (Government of South Africa, 2024), which implies that more personnel that the steel organisation employs are expected to be older than 34 years.

More respondents to this study were male (67.2 percent or 80 responses). This is representative of the sample population based on the steel organisation’s reported workforce profile for 2022 for the mid-to-senior management levels.

Of the total number of respondents, 79.8 percent have a total work experience of more than 15 years. As the sample population is the steel organisation’s mid-to-senior management levels, respondents are expected to have extensive experience in their respective fields and the necessary insight to achieve organisational outcomes (Indeed, 2024b). Furthermore, 57.9 percent of respondents have a tenure in the steel organisation of more than 15 years while 26.9 percent have a tenure between eight and 15 years. This is positive as employees who have been employed for longer terms provide organisations with an advantage through their specialist skills from their work experience, understanding of organisational targets, culture and procedures, in-depth knowledge of processes and pitfalls that the company should avoid, and support of new entrants (Malik, 2024).

Regarding organisational role, or job title, 67.3 percent of respondents are senior specialists and specialists, 21.8 percent are middle managers and 10.9 percent are senior managers. The senior specialists and specialists’ categories include a wide range of professionally qualified and experienced employees with skills and expertise ranging from engineers, finance, marketing and occupational health and safety. Due to this, the senior specialist and specialist categories form the largest portion of the sample population of the chosen steel organisation. In contrast, the senior managers who are responsible for managing middle managers form the smallest portion of the population.

5.3. Discussion on the reliability of the measuring instruments

Three measuring instruments or scales have been used in this study: IAOS as a measure of individual accountability, MWMS for employee motivation and NGSE for employee self-efficacy. Despite these scales having been tested for reliability during their development, it is crucial to determine if the instruments remain reliable when applied to field conditions. This ensures that the instrument consistently measures the same indicator and provides similar outcomes (Roestenburg, 2021:206). As van Aardt and Hirschsohn (2021:54) suggested, Cronbach's alpha is used to test internal reliability for multiple-indicator measures. Cronbach's alpha ranges from between 0 (which denotes no internal reliability of an instrument) to 1 (which signifies perfect internal reliability of an instrument), with values between 0.80 and 0.90 denoting a scale with high reliability (Roestenburg, 2021:206). Values between 0.7 and 0.8 indicate acceptable internal reliability for a scale (van Aardt & Hirschsohn, 2021:54).

The IAOS consists of three dimensions, which are "Intensity", "Focus", and "Salience", and 13 items (Frink *et al*., 2018:31). Cronbach's alpha for the IAOS is calculated as 0.82. In contrast, the dimensions range between 0.76 and 0.8. This signifies that the overall scale and dimensions have high internal reliability. This indicates that there is a greater probability that the data related to individual accountability that has been obtained using the IAOS is dependable and consistent (Roestenburg, 2021:206) and that all of the dimensions that are measured relate to each other (van Aardt & Hirschsohn, 2021:54).

The MWMS measures the dimensions of "Extrinsic Regulation- Social", "Extrinsic Regulation-Material", "Introjected Regulation", "Identified Regulation", "Intrinsic Motivation", and "Amotivation" (Gagné *et al*., 2015:196) using a 19-item scale. Cronbach's alpha of the overall MWMS is 0.8, which indicates high internal reliability. Cronbach's alpha for all the dimensions other than "Amotivation" ranges between 0.77 and 0.92, which signifies that the dimensions range from acceptable to high internal reliability. However, Cronbach's alpha for "Amotivation" is found to be 0.61, which indicates lower internal reliability for this dimension. Despite this, researchers have considered Cronbach's alpha values between 0.6 and 0.7 to be acceptable (Ursachi *et al*., 2015:681). Hence, the "Amotivation" dimension has been included in the analysis of this study.

The NGSE scale is a unidimensional measure of employee self-efficacy consisting of eight items (Chen *et al*., 2001:79). Cronbach's alpha is 0.92, which denotes high internal reliability. This implies that the NGSE provides a consistent measurement of employee self-efficacy under the conditions for which data was collected from respondents of the selected South African steel organisation.

5.4. Discussion on the relationship between individual accountability and employee motivation

To address the research question of whether a positive statistically significant relationship exists between individual accountability and employee motivation, the following null and alternative hypotheses were formulated:
Null Hypothesis ($H_{0,1}$): No significant statistical relationship exists between individual accountability and employee motivation levels.
Alternative Hypothesis (H_1): A significant statistical relationship exists between individual accountability and employee motivation levels.

Using regression on MS Excel, *p for the relationship between individual accountability and employee motivation is found to exceed the 0.05 level of significance (p= 0.194) in this study. This denotes that a statistically significant relationship does not exist between individual accountability and employee motivation. Furthermore, The F is considered to be small at 1.71*. On the basis of these results, the null hypothesis ($H_{0,1}$) has been accepted.

Research indicates that while the main purpose of accountability in organisations is to motivate employees to proactively work towards achieving organisational goals, accountability mechanisms must be appropriately applied to achieve the desired results. (Li *et al*., 2022:9). Mero *et al*. (2014:1646) notes that managerial monitoring behaviours which are used as a mechanism to create individual accountability in employees motivates personnel to engage in behaviours that allow them to justify their performance to achieve the maximum gain and thereby, the lowest negative outcomes. Although respondents' mean score for the "Intensity" dimension on the IAOS is 5.76, findings from the MWMS indicate that employees scored low on the dimensions of "Extrinsic Regulation- Social" (Mn= 1.97 and SD= 1,47) and "Extrinsic Regulation- Material" (Mn= 2.51 and SD= 1.76). This implies that while managerial monitoring behaviours may result in higher levels of individual accountability, they do not influence employee motivation within the sample population of this study.

Research by O'Donoghue and van der Werff (2022:1215) suggests that individual accountability that originates from empowering leadership positively influences the identified motivation of employees. Empowering leadership refers to behaviours displayed by leaders in an organisation that supports the workplace autonomy of employees and includes coaching, sharing information with personnel and displaying empathy towards employees (O'Donoghue & van der Werff, 2022:1207). Despite respondents scoring high on the overall IAOS (Mn= 6.08 and SD= 1.09) and the "Identified Regulation" dimension of the MWMS (Mn= 6.07 and SD= 1.09), the lack of a statistically significant relationship between individual accountability and employee motivation in this sample population implies that the source of individual accountability in the chosen South African steel organisation may not include empowering leadership.

5.5. Discussion on the influence of self-efficacy as a mediating variable in the relationship between individual accountability and employee motivation

The second research question of this study focuses on whether self-efficacy is a mediator in the relationship between individual accountability and employee motivation. The null and alternative hypotheses used to address this research question are as follows:

Null Hypothesis ($H_{0,2}$): Self-efficacy does not mediate the relationship between individual accountability and employee motivation levels.
Alternative Hypothesis (H_2): Self-efficacy partially or fully mediates the relationship between individual accountability and employee motivation levels.

Using the method proposed by Baron and Kenny (1986:1176-1177), it has been found that for the relationship between individual accountability and self-efficacy (Path A), the *p*-value of less than 0.001 is below the significance level of 0.05, which denotes that a significant statistical relationship exists between individual accountability and employee motivation. Additionally, the F ratio of Path A is 13.83, which indicates that the null hypothesis ($H_{0,2}$) cannot be accepted. For the relationship between self-efficacy and employee motivation (Path B), *a p-value of 0.005 is below the significance level of 0.05, which indicates that a significant statistical relationship exists between self-efficacy and employee motivation and the F ratio is 4.83, which suggests that the* null hypothesis ($H_{0,2}$) cannot be accepted. Path C has been discussed in the previous section.

According to Baron and Kenny (1986:1177), for self-efficacy to be considered a mediator variable, individual accountability must influence self-efficacy (Path A), individual accountability must have a statistically significant relationship with employee motivation (Path C), and self-efficacy must influence employee motivation (Path B). The current study does not achieve the requirements for

Path C. However, research by Zhao *et al*. (2010:200) indicates that the Sobel test must be used to establish if the indirect effect of self-efficacy as a mediator in the relationship between individual accountability and employee motivation is significant. Based on the results, the test score is above 1.96 (z = 2.26), which is significant. If the coefficient of the independent variable (individual accountability) of Path B is not statistically significant, Zhao *et al*. (2010:201) suggest that indirect-only mediation exists. Based on these results, the null hypothesis ($H_{0,2}$) is rejected, and the alternative hypothesis (H2), which is that self-efficacy partially or fully mediates the relationship between individual accountability and employee motivation, is accepted.

Hence, the results suggest that the perception of employees in the sample population that they are accountable for achieving task outcomes, organisational outcomes, high-quality work and displaying appropriate workplace behaviours drives their belief that they can successfully perform these tasks. A study conducted by Goodman *et al*. (2021:680) notes that a driver of felt accountability in top managers is personal accountability due to the need to protect one's reputation and brand image, resulting in managers aiming to perform tasks to the best of their ability. In this manner, individual accountability may positively influence self-efficacy in the workplace, particularly for higher-ranking employees like those in the mid-to-senior management levels within the chosen steel organisation. It is important to note that personnel who display high self-efficacy are more likely to display aptitude when working on challenging tasks and commitment to attaining organisational goals and are more likely to associate failure with the result of a lack of sufficient individual effort (Agholor, 2019:147).

Additionally, a positive and statistically significant relationship exists between self-efficacy and employee motivation (β= 0.37 and p= 0.005), which is found when employee motivation is regressed on individual accountability and self-efficacy. Based on the findings of the overall NGSE scale (Mn= 4.18 and SD=0.66), this implies that employees in the selected South African steel organisation consider it possible to successfully overcome workplace challenges and achieve organisational outcomes despite the varying nature of the tasks. Furthermore, this high level of self-efficacy allows employees to achieve a high level of employee motivation related to the dimensions of "Identified Regulation" (Mn= 6.07 and SD= 1.09) and "Intrinsic Motivation" (Mn= 4.97 and SD= 1.54). This implies that employees' high self-efficacy beliefs allow them to put effort into tasks they perceive to be important or enjoy as they believe they have the necessary capabilities and skills to achieve the required task outcomes successfully. It is important to note that the demographic information indicates that 96.6 percent of employees have a tenure of 4 years or greater. This allows employees to have the necessary specialist skills from their work experience, an understanding of organisational targets, culture and procedures, and an in-depth knowledge of processes (Malik, 2024), which may explain the high self-efficacy of this study’s sample population.

5.6. Managerial implications of this study

To induce employee accountability, organisations develop mechanisms like policies and procedures that include employment contracts, reporting and monitoring systems, and disciplinary procedures (Han & Perry, 2020a:288). This study's findings on the influence of individual accountability on employee motivation and the mediating effect of self-efficacy have several managerial implications.

First, since the purpose of organisation accountability mechanisms is to motivate employees to work proactively towards organisational targets and outcomes (Li *et al*., 2022:9), it is crucial for organisations to measure the effectiveness of their accountability practices. Although respondents perceive themselves to be accountable to multiple people within the organisation for various things, which implies heightened monitoring pressure, respondents have lower motivation levels related to seeking approval from the parties monitoring them and avoiding punishments or receiving gains. This means that formal accountability mechanisms such as balanced scorecards and disciplinary procedures have a limited impact on employee motivation to achieve organisational outcomes and expectations within the mid-to-senior management levels of the chosen steel organisation.

Second, individual accountability and employees’ motivation to engage in tasks of personal significance are positively associated with empowering leadership (O'Donoghue & van der Werff, 2022:1215). The lack of a statistically significant relationship between individual accountability and employee motivation in this sample population suggests that mid-to-senior management may perceive the current leadership style within the organisation as not supporting their autonomy.

Third, as a mediator variable, self-efficacy positively influences employee motivation in environments with high individual accountability. This implies that when balancing the organisation’s requirements to achieve individual accountability and employee motivation, focus must also be placed on employee self-efficacy.

5.7. Recommendations for future research

Currently, there is a lack of understanding of the relationship between individual accountability and employee motivation and the role of self-efficacy as a mediator of this relationship. While this study furthers knowledge on the influence of individual accountability on employee motivation, it does not consider the possible sources of accountability. As the impact of individual accountability on employee outcomes like motivation is influenced by how an organisation and its managers apply accountability mechanisms (Li *et al*., 2022:9), future research on the influence of accountability mechanisms on employee motivation should also be considered.

This study has also explored the role of self-efficacy as a mediator in the relationship between individual accountability and employee motivation. However, further research is required on the role of other related but distinct constructs that are possible mediators in the relationship between individual accountability and employee motivation. This includes locus of control, which is employees' belief regarding the level of influence they have over their behaviours, and core self-evaluations, which is employees' belief in the capabilities and ability to control their actions in different environments (Frink *et al*., 2018:12).

Lastly, this study was conducted through purposive sampling of the mid-to-senior management levels within a chosen South African steel organisation. Additional research is required to determine whether the findings of this study extend to participants outside this steel organisation's sample population as well as for mid-to-senior management in other types of South African companies.

5.8. Limitations of the study

There are several limitations associated with this study. As this study has used a cross-sectional time horizon, the phenomena identified only apply to a particular time frame (Saunders *et al*., 2023b:212). Additionally, purposive sampling was used to collect data from the employees of a selected South African steel organisation. Hence, findings from this study apply to the sample population and cannot be generalised for employees in the selected steel manufacturing company that have been excluded from this study or the steelmaking industry within South Africa as a whole (Faasen, 2021:224).

5.9. Contributions of the study

According to Hall *et al*. (2017:204), research related to accountability remains in its early stages. This study focuses on the micro-analytical perspective of accountability, known as individual accountability, to gain insights into employees' subjective experience of accountability and how this impacts individual employee outcomes and behaviours (Han & Perry, 2020a:288). While individual accountability has been found not to have a statistically significant relationship with employee motivation, this relationship is mediated by self-efficacy. This contributes to the body of knowledge on the complex nature of individual accountability (Hall *et al*., 2017:208) and the need to understand moderating and mediating variables that influence the connection between individual accountability and workplace outcomes (Hall & Ferris, 2011:144).

5.10. Conclusion

This study aims to explore the influence of individual accountability on employee motivation. Furthermore, the impact of self-efficacy as a mediator variable in this relationship has been explored. Findings indicate no statistically significant direct relationship exists between individual accountability and employee motivation, and indirect-only mediation exists through self-efficacy. This suggests that employees in mid-to-senior management roles in the selected South African steel organisation perceive themselves to be accountable for achieving task outcomes, organisational outcomes, high-quality work and displaying appropriate workplace behaviours, which drives their belief that they can successfully perform these tasks. This, in turn, motivates employees to put effort into the tasks that they perceive to be important or enjoy.

While this research contributes towards the body of knowledge on individual accountability, one of the main limitations of this study is that purposive sampling has been used to collect data. Hence, additional research is required to determine whether the findings of this study extend to mid-to-senior management in other types of South African companies. This is particularly important as research in accountability remains in its early stages (Hall *et al*., 2017:204), and accountability research in the South African and African contexts is limited.

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ANNEXURE A: RESEARCH QUESTIONNAIRE

<table>
<tr><td colspan="8">Section 1: Demographic Information

Please mark the most appropriate option:</td></tr>
<tr><td>1.1. What is your age?</td><td>18-24 years</td><td>25-34 years</td><td>35-44 years</td><td>45-54 years</td><td>55-64 years</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td>1.2. What gender do you most identify with?</td><td>Male</td><td>Female</td><td>Do not wish to disclose</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td>1.3. What is the total number of years of work experience that you have?</td><td>0-3 years</td><td>4-7 years</td><td>8-11 years</td><td>12-15 years</td><td>More than 15 years</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td>1.4. How long have you been employed in your current organisation?</td><td>0-6 months</td><td>6 months-3 years</td><td>4-7 years</td><td>8-11 years</td><td>12-15 years</td><td>More than 15 years</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td>1.5. What is your current organisational role or job title?</td><td>Specialist (professionally qualified)</td><td>Senior Specialist</td><td>Middle Manager</td><td>Senior Manager</td></tr>
<tr><td colspan="8"></td></tr>
<tr><td colspan="8">Section 2: Individual Accountability in Organizations Scale (IAOS) (Frink et al., 2018:31).

Please indicate your level of agreement with each of the following statements by marking the most appropriate option:</td></tr>
<tr><td>2.1. I find myself accountable to a variety of different people.</td><td>1= strongly disagree</td><td>2= disagree</td><td>3= somewhat disagree</td><td>4= neither agree nor disagree</td><td>5= somewhat agree</td><td>6= agree</td><td>7= strongly agree</td></tr>
<tr><td>2.2. The scope of things for which I may have to answer is very broad.</td><td>1= strongly disagree</td><td>2= disagree</td><td>3= somewhat disagree</td><td>4= neither agree nor disagree</td><td>5= somewhat agree</td><td>6= agree</td><td>7= strongly agree</td></tr>
<tr><td>2.3. The scope of people to whom I may have to</td><td>1= strongly disagree</td><td>2= disagree</td><td>3= somewhat disagree</td><td>4= neither agree nor disagree</td><td>5= somewhat agree</td><td>6= agree</td><td>7= strongly agree</td></tr>
</table>

answer is very broad.							
2.4. I find myself accountable to many different people for many different things.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.5. I feel accountable at work for the results or outcomes of my job.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.6. I feel accountable at work for producing a certain quality of work.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.7. I feel accountable at work for the specific actions or behaviours that lead to my job results or outcomes.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.8. I feel accountable for demonstrating ethical behaviour at work.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.9. I feel accountable at work for reflecting the proper values that my organisation embraces.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.10. I am accountable for some really important programs and projects at work.	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.11. I deal with and am accountable for, critical issues and projects that contribute strongly to the effectiveness	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree

	of my work unit.							
2.12.	**The work I do, and am accountable for, is central to the overall effectiveness of my organisation.**	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree
2.13.	**I am accountable for some of the most important work that we do in my organisation.**	1= strongly disagree	2= disagree	3= somewhat disagree	4= neither agree nor disagree	5= somewhat agree	6= agree	7= strongly agree

Section 3: Multidimensional Work Motivation Scale (MWMS) (Gagné *et al*., 2015:196).

Based on the question ***"Why do you or would you put effort into your current job?",*** indicate your level of agreement with each of the following statements by marking the most appropriate option***:***

3.1.	**I don't because I really feel that I am wasting my time at work.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.2.	**I do little because I don't think that this job is worth putting efforts into.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.3.	**I don't know why I'm doing this job, it's pointless work.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.4.	**To get others' approval (e.g., supervisor, colleagues, family, clients etc.).**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.5.	**Because others will respect me more (e.g., supervisor, colleagues, family, clients etc.).**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.6.	**To avoid being criticised by others (e.g., supervisor, colleagues,**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely

	family, clients etc.).						
3.7.	**Because others will reward me financially only if I put enough effort in my job (e.g., employer, supervisor etc.).**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.8.	**Because others offer me job security if I put enough effort in my job (e.g., employer, supervisor etc.).**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.9.	**Because I risk losing my job if I don't put enough effort in it.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.10.	**Because I have to prove to myself that I can.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.11.	**Because it makes me feel proud of myself.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.12.	**Because otherwise, I will feel ashamed of myself.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.13.	**Because otherwise, I will feel bad about myself.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.14.	**Because I personally consider it important to put efforts in this job.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.15.	**Because putting efforts in this job aligns with my personal values.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely

3.16.	**Because putting efforts in this job has personal significance to me.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.17.	**Because I have fun doing my job.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.18.	**Because what I do in my work is exciting.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely
3.19.	**Because the work I do is interesting.**	1= not at all	2= very little	3= a little	4= moderately	5= strongly	6= very strongly	7= completely

Section 4: New General Self-Efficacy Scale (NGSE) (Chen *et al*., 2001:79)

Self-efficacy is your confidence in your ability to perform effectively to achieve outcomes in a wide variety of situations or settings. Self-esteem refers to your evaluation of your worth, value or importance as a person.

Please indicate your level of agreement with each of the following statements by marking the most appropriate option:

4.1.	**I will be able to achieve most of the goals that I have set for myself.**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.2.	**When facing difficult tasks, I am certain that I will accomplish them.**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.3.	**In general, I think that I can obtain outcomes that are important to me.**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.4.	**I believe I can succeed at most any endeavour to which I set my mind.**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.5.	**I will be able to successfully overcome many challenges.**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.6.	**I am confident that I can perform effectively on**	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree

many different tasks.					
4.7. Compared to other people, I can do most tasks very well.	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree
4.8. Even when things are tough, I can perform quite well.	1= strongly disagree	2= disagree	3= neither agree nor disagree	4= agree	5= strongly agree

ANNEXURE B: ETHICAL CLEARANCE LETTER

NWU®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE-BOPHIRIMA

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: http://www.nwu.ac.za

Senate Committee for Research Ethics
Tel: 018 299-484
Feziwe.Mseleni@nwu.ac.za

02 August 2024

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on, 02/08/2024 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-REC) 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: Exploring the Influence of Individual Accountability on Employee Motivation in a Selected South African Steel Organisation: The Mediator Role of Self-Efficacy

Study Leader/Supervisor (Principal Investigator)/Researcher): Prof P.A. Botha

Student: F. Raoof (49856634)

N	W	U	-	0	0	6	0	1	-	2	4	-	A	4
Institution				Study Number						Year			Status	

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type:
Commencement date: 02/08/2024 **Risk:** Minimal
Expiry date: 02/08/2025

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):

- None.

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.*

n the interest of ethical responsibility, the NWU-SCRE and EMS-REC reserves the right to:

1

- *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.*

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,

Prof Diana Viljoen-Bezuidenhout
Chairperson: NWU Economic and Management Sciences Research Ethics Committee

Source: P Botha personal communication, August 15, 2024

ANNEXURE C: APPROVAL FROM RESEARCHER'S TO USE QUESTIONNAIRES

The Multidimensional Work Motivation Scale (MWMS).

Reference to use:
Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A. et al. (in press). The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*.

It is free to use the MWMS if it is for academic research purposes. It is not allowed to use the scale for commercial purposes, such as paid consultation.

Source: M Gagné personal communication, March 22, 2024.

PsycTESTS®

New General Self-Efficacy Scale

PsycTESTS Citation:
Chen, G., Gully, S. M., & Eden, D. (2001). New General Self-Efficacy Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t08800-000

Test Shown: Full

Test Format:
The measure's 8 items are rated on a 5-point Likert-type scale from strongly disagree (1) to strongly agree (5).

Source:
Chen, Gilad, Gully, Stanley M., & Eden, Dov. (2001). Validation of a new general self-efficacy scale. Organizational Research Methods, Vol 4(1), 62-83. doi: 10.1177/109442810141004, © 2001 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Source: G Chen personal communication, February 15, 2024.

Re: Request for permission to use Individual Accountability in Organizations Scale

JB John Baur<john.baur@unlv.edu>
To: Firdaus Raoof

Thu 15/02/2024 20:30

Some content in this message has been blocked because the sender isn't in your Safe senders list.

Trust sender | Show blocked content

You replied on Thu 15/02/2024 21:59

Hi Firdaus,

Thank you for your email. You have permission to use the scale. In case you don't already have them, the items and subdimensions are provided below. Best of luck with your work!

Source: J Baur personal communication, February 15, 2024.

ANNEXURE D: LETTER FROM LANGUAGE EDITOR

Psychmetrica

CERTIFICATE: LANGUAGE EDITING

Herein, confirmation that the following document was edited:

MASTER OF BUSINESS ADMINISTRATION

Title

Exploring the influence of individual accountability on employee motivation in a Selected South African steel organisation: The mediator role of self-efficacy

F RAOOF
Student number: 49856634

The following was edited according to requirements, subject to NWU Harvard Guidelines:

Clarity and coherence, grammar, punctuation, consistency of style, citations and references, formatting and layout, word choice and clarity, consistency of terminology, and readability

(Academic integrity of the document was upheld and final changes and suggestions must be made by the student. Editing check sheet annexed as page 2 of this certificate)

W Smith
Registered Psychometrist
HPCSA: PMT0097012

R du Plessis
Ethical Editing Advisor

EDITING CHECK SHEET

Clarity and coherence	**EDITOR REMARKS**
Paper was presented clearly and in a coherent manner Logical flow of information	Checked
Grammar and punctuation	
Grammatical errors, subject-verb agreements, grammar consistency and punctuation	Checked
Consistent Style	
Writing style, consistency in tone, voice and formatting	Checked
Citations and References	
Harvard Referencing style applied	Checked with suggestions
Formatting and Layout	
According to specific formatting guidelines (Arial 12pt, Line Spacing 1.5, Justified	Checked with amendments. Assisted checking with template TOC
Word choice and clarity	
Precise and appropriate use of words	Checked
Consistency in Terminology	Checked
Objective and Tone	Checked
Review Figures and tables	
Check the accuracy of placement and alignment Ensure properly labelled	Checked
Abstract and Conclusion	
Grammar, spelling, flow and layout	Checked
Readability	
Overall readability Headings, subheadings and bullet points Use of paragraphs	Checked

Source: W Smith personal communication, November 25, 2024.