

Relationship between occupational stress, resilience and psychological well-being among prosecutors in Botswana

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Mini-dissertation submitted in partial fulfilment of the requirements for the degree Master of Social Science in Clinical Psychology at the North-West University

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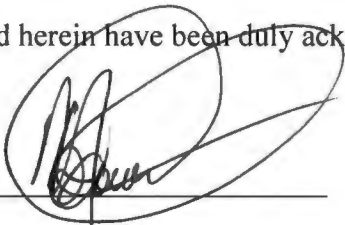
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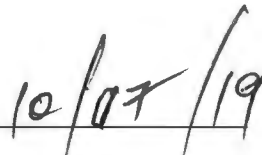
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DECLARATION

I, Lesedi Moamogwe, declare that the mini-dissertation entitled: “**Relationship between occupational stress, resilience and psychological well-being among prosecutors in Botswana**”, hereby submitted for the degree of *Magister Curationis* in Clinical Psychology at the North-West University, has not previously been submitted by me for a degree at this or any other institution. I further declare this is my own work in design and execution and that all materials contained herein have been duly acknowledged by means of complete references.



Lesedi Moamogwe



Date

DEDICATION

This study is dedicated to members of my family and friends, particularly my parents, for their support and encouragement during my studies.

ACKNOWLEDGEMENTS

I extend my heartfelt gratitude to all those who contributed towards the successful completion of this study.

I am grateful to my supervisors, Dr Erasmus, Mrs Pila-Nemutandani and Dr Akanni, for their patience, sacrifice, support and useful insights during my studies.

I wish to thank all the members of staff of the Department of Psychology (Ipelegeng Child and Family Centre), who contributed towards the completion of this study. I appreciate your support and encouragement during this journey.

I also wish to thank the Department of Public Prosecutions, Botswana, for allowing me to conduct this study in their department.

A special thanks to my friends and family, Mama, Papa, One, Lesego, Oteng, Phetogo, Thobo, Thobo, Pearl, Charlotte, Edwin, Dolly, Mogapi, Lala, Tsholo, Wandile, Naane and Tshepo. You have been my cheerleaders every step of the way.

A final thank you to Baraka, whose support I will forever cherish.



ABSTRACT

This study investigated the relationship between occupational stress, resilience and psychological wellbeing. The aim of this study was to investigate the impact of occupational stress and resilience on psychological well-being among all prosecutors employed in the Department of Public Prosecutions (DPP), Botswana in order to ascertain the relationship between occupational stress, resilience and psychological well-being. A quantitative survey methodology was used to conduct this study. A convenience sample of 92 respondents participated in the study. A questionnaire, with three scales titled Ryff Scale of Psychological Well-being, Resilience Scale and Generic Job Stress Scale were used for data collection and thereon statistical analysis carried out. The hypotheses for the study were tested using the Pearson Moment Correlation and multiple regression statistical techniques. The results revealed a significant relationship between psychological well-being and perceived employment opportunities ($r=-.34$, $p<0.01$), Role ambiguity ($r= -.47$, $p<0.01$), Intragroup conflict ($r= .58$, $p<0.01$), Intergroup conflict ($r=-.40$, $p<0.01$) and Resilience ($r=-.49$, $p<0.01$) of respondents. Occupational stress affects the psychological wellbeing of prosecutors. Conflict resolution training, enhanced support structures to engender a positive work environment and improve resilience of prosecutors were recommended.

Keywords: Occupational Stress, Prosecutors , Psychological Wellbeing, Resilience.

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Acronyms

Department of Public Prosecutions DPP

Attorney General Chambers (AGC)

National Institute of Occupational Safety and Health (NIOSH)

CHAPTER ONE

1.1 Introduction and background to the study

Occupational stress has come to be seen as a problem that affects personnel at every level and has increased since the 1990’s (International Labour Organisation, 2016; Senova & Antosova, 2014)

The Department of Public Prosecutions (DPP), which is part of the Attorney General Chambers (AGC), Botswana, is constitutionally mandated to institute and undertake criminal proceedings

against any person alleged to have committed a crime (Chamme, 2017). DPP is made up of lawyers in Botswana, who are tasked with the responsibility to carry out prosecutions in the country. A detailed audit of DPP revealed a huge backlog of cases in the criminal justice system, some of the cases having been pending for over 18 months (Chamme, 2017). Lack of prosecutors in the country is a possible reason why there are huge workloads and backlogs, as there are many vacant posts that have not been filled due to unavailability of suitably skilled human resources (Mozola, 2017).

The unavailability (in the local market) of suitable, experienced candidates is often found in the Administration of Justice, AGC and DPP, thus making it a challenge to fill vacant posts (Chamme, 2017). The vacancies are due to high attrition rate in the legal fraternity, largely due to the resignation of officers, going to places where remuneration and career progression prospects are better (Botswana, 2017). According to Chamme (2017), the massive resignations of experienced prosecutors leads to cases taking too long to be completed and the public losing confidence in the prosecuting authority (Khan, 2010). Although there have been special dispensations to allow the AGC to develop and expand to meet its critical human resource needs, this is hampered by limited resources, it is also hampered by an imbalance between recruitment, retention, separation and resignations of personnel (Botswana, 2015). That is, there is an imbalance between the number of people being recruited and retained against those who are leaving the Department, with more leaving than staying.

Some lawyers within AGC have mentioned experiencing personal burnout due to a heavy caseload for each officer along with unattractive pay and benefits as a reason for leaving their positions in the current workplace (Botswana, 2015); their health has been compromised by elements relating to the work environment. Although the AGC reports difficulty retaining human

resource, the labour market in Botswana is characterised by a high graduate unemployment rate (Komanyane, Siphambe, & Oageng, 2017). The promotion of well-being has refocused healthcare towards the recognition of developing traits which delay falling ill, promote quick recovery and maintaining that state, thus leading to flourishing (Abiola & Udofia, 2011; Huerta-Franco et al., 2013; Wagnild, 2009). Crosby, Kegler, and DiClemente (2002) state that the goals of health promotion include emphasis on health promoting conditions.

Keyes (2013) notes that the necessity of promoting and protecting positive mental health throughout the life span should start early as good health is more than the absence of psychopathology (Ryff, 1995), thus bringing to the fore, the concept of psychological well-being (Kirves, 2014). Psychological well-being refers to the combination of feeling good and functioning effectively (Hupert (2009) which is based on factors such as autonomy, environmental mastery, positive growth, self-acceptance, positive relations with others and purpose in life (Ryff, 1995). Within the context of this study, promoting psychological wellbeing is related to better job performance (Wright & Cropanzano, 2004). Adequate job performance may be hampered when employees experience stress and interventions not in place or inadequate. Stress has increasingly come to be recognised as a part of our daily lives, manifesting in many different ways such as through physical, behavioural or emotional symptoms (Jovanovic, Lazaridis, & Stefanovic, 2006). Occupational stress is defined as the physical and emotional responses incurred from the work environment that are harmful (Tsai, Huang, & Chan, 2009). Work stress and job stress will also be seen to refer to occupational stress in this research. Stress could stem from one's occupation such as establishing and maintaining work relationships, ineffective workplace interactions, staff shortages, inadequate salaries and excessive administrative duties among nurses (van der Colff & Rothmann, 2014), heavy workload and administrative duties for teachers (Buhare, Ai Lin, &

Wider, 2016) as well as processing cases for prosecutors (Na, Choo, & Klingfuss, 2017). Working conditions could affect several aspects of one's health, including their psychological well-being (Pahlevani, Radmehr, Amini, Bahraminasab, & Yadzani, 2015). Stress leads to changes in physiological, psychological and behavioural functions, which could be detrimental to individual health as well as organisational and national productivity (Lundberg & Cooper, 2010).

The shift in focus from the reduction of negative events at work as well as their psychological, physical and economic costs to facilitating positive experiences that promote health and well-being, brings to the fore, the notion of resilience. Resilience is as a psychological process developed in response to intense life stressors, which facilitates healthy functioning (Johnson *et al.*, 2011). It is also defined as the absence of psychopathology or the presence of competence in the context of significant adversity, a personality characteristic that moderates the negative effects of stress, thus promoting adaptation (Wagnild & Young, 1993) and the ability of humans to bounce back and even thrive in the face of serious life challenges (Baumgardner & Crothers, 2010). The definitions have a common meaning, and focuses on a positive outcome, following significant challenges for the individual.

1.2 Problem Statement

Lawyers are exposed to vulnerable clients and cases such as murder and rape, which makes them susceptible to vicarious traumatisation (Nedim, 2015) as well as heavy workloads (Botswana, 2015). It is also said that lawyers and law students suffer at a disproportionate rate from clinical depression, which is partly caused by the traditional adversarial manner of the legal professions' practice and education (Parker, 2014). Prosecutors have been shown to cope with psychological discomfort and tension, using negative coping mechanisms such as drug abuse, social isolation, and by becoming more ambitious and aggressive (Daicoff, 1998). Daicoff (1998) further found

that depression, anxiety, social isolation and alienation, hostility, paranoid ideation, and obsessive-compulsive symptoms were more frequent in Prosecutors than in the general population. (Briton, 2009) concurs with Daicoff (1998), but further highlights that prosecutors are two and a half times more likely to suffer from clinical depression than other professionals are. Austin (2014), however, found that prosecutors suffer from depression at triple the rate of non-prosecutors.

Although the literature highlights occupational stress among police officers (Agolla, 2009), among nurses (Fako, 2010; Fako, amp, & Linn, 2006; Maphangela, 2015), secretaries (Plattner & Mberengwa, 2010), more still needs to be done for law enforcement officers such as prosecutors. Psychosomatic complaints due to lack of promotion opportunities (Plattner & Mberengwa, 2010), use of force and workplace injuries (Agolla, 2009), poor working conditions, lack of interest in staff welfare and poor relationship with co-workers (Maphangela, 2015) were found to be prevalent.

Prosecutors are a critical part of the justice system in any economy in order to dispense justice, however; more still needs to be done to understand their psychological well-being as it may affect the effectiveness of their duties. Poor psychological well-being due to poor working conditions may lead to high staff turnover, loss of trained labour and lack of experienced prosecutors, which may hinder the dispensation of justice. Lack of financial and human resources have been cited as crippling the judicial system and hindering the dispensation of justice in the legal system in Botswana (Mozola, 2017).

Prosecutors have complex and heavy workloads, having to liaise with different organs of the justice system such as the police, the accused and witnesses in cases, which requires them to perform different roles, at times, coming in conflict with those around them, all the while considering their own career development. The ability to withstand stress has become important

as more complex and integrated social organisations with added complex limitations on individual behaviour develop (International Labour Organisation, 2011a). In the work context, the more resilient an individual is, the more likely that the individual can function effectively in such a complex organisation. The DPP is part of the Attorney General's Chambers, and currently finds it difficult to recruit personnel for vacant posts. Despite the efforts by the AGC to ease hiring procedures to the respective departments, the problem has continued (Chamme, 2017). The problem negatively affects the prosecution of cases and the efficient dispensation of justice for the population. A possible cause of this problem is poor psychological well-being of prosecutors, owing to the experience of occupational stress and low resilience levels. Knowledge regarding the interaction of resilience, occupational stress and the psychological well-being of prosecutors in the DPP may provide policy makers with valuable information and guide intervention strategies and policies for prosecutors to improve work conditions and ensure the retention of skilled human resource.

1.3 Research questions

The following research questions are indicated:

- What is the relationship between occupational stress and psychological well-being among prosecutors? and
- What is the relationship between resilience and psychological well-being among prosecutors?

1.4 Aim of the study

The main aim of this study was to investigate the relationship between occupational stress being role conflict, role ambiguity, inter-group conflict, intra-group conflict, perceived employment

opportunities, resilience and psychological well-being as factors of autonomy, environmental mastery, personal growth, positive relations with others, self-acceptance and purpose in life.

The specific aims of the study were to:

- Investigate occupational stress (role conflict, role ambiguity, inter-group conflict, intra-group conflict and perceived employment opportunities), resilience and psychological well-being among prosecutors; and
- Determine if there is a relationship between occupational stress, resilience and psychological well-being.

1.5 Objectives of the study

The main purpose of this study was to examine the relationship between occupational stress, resilience and psychological well-being among prosecutors in DPP.

1.6 Scope of the study

The scope of this study was limited to lawyers employed as prosecutors in DPP (Botswana) and the interaction between occupational stress, resilience and psychological well-being was examined.

1.7 Significance of the study

This study examined the relationship between occupational stress, resilience and psychological well-being among prosecutors in Botswana. Positive psychological well-being is linked with positive life functioning as well as improved performance in the work place. Previous studies, however, have focused on negative outcomes and not necessarily on psychological well-being, an assumption that all stressors affect psychological well-being cannot be made. Although some studies have explored the interaction of occupational stress, resilience and psychological well-being constructs, more still needs to be done to include ways of facilitating and promoting

positive psychological well-being. This study provides insights on the relationship between occupational stress, resilience and psychological well-being among prosecutors in the DPP in Botswana. It also adds to the body of knowledge as there is scant research on the subject matter in Botswana. This could enable facilitation and promotion of positive practices by employees, thus enhancing psychological well-being and resilience as well as managing occupational stress in the workplace. The study will also assist the employer as it can contribute towards practice, policymaking and research in these areas in Botswana to improve working conditions for employees.

1.8 Hypotheses

The hypotheses following hypotheses were stated:

- There is a significant relationship between occupational stress (perceived employment opportunities) and psychological well-being;
- There is a significant relationship between occupational stress (role conflict) and psychological well-being;
- There is a significant relationship between occupational stress (role ambiguity) and psychological well-being;
- There is a significant relationship between occupational stress (intra-group) and psychological well-being;
- There is a significant relationship between occupational stress (inter-group conflict) and psychological well-being;
- There is a significant relationship between resilience and psychological well-being; and
- There are independent and joint contributions of occupational stress on psychological well-being.

1.9 Chapter outline

The study is organised as follows:

Chapter 2 discusses the literature review on occupational stress, resilience and psychological wellbeing. Emphasis is on the interaction of occupational stressors and their influence on psychological wellbeing as well as the influence of resilience on psychological wellbeing.

Chapter 3 provides a description of the research approach, research design, participants, measures utilized, data collection procedure and the analysis methods. It also provides an outline of the ethical considerations of the study.

Chapter 4 presents the results of the study, it provides the demographic characteristics of participants, correlations and regression analysis.

Chapter 5 provides a discussion of the study results, conclusions drawn, limitations of the study and the recommendations provided.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL PERSPECTIVE

2.1 Introduction

This chapter focuses on the literature review on occupational stress, resilience and psychological well-being. It highlights previous studies on these concepts as well as provides a review of studies on the interaction between these concepts. The discussion in this chapter also focuses on theories proposed to explain occupational stress, resilience and psychological well-being. There is limited information on psychological well-being in Botswana. Thus, this study relied mainly on studies conducted elsewhere.

2.2 Psychological well-being

The concept of psychological wellbeing is one that has been used widely by many authors, it was thus imperative provide a precise definition to guide this study. Psychological wellbeing is the combination of feeling good and functioning effectively (Hupert, 2009). Dodge, Daly, Huyton, and Sanders (2012) present a definition of psychological wellbeing that centres on the state of equilibrium for the individual which is affected by events and challenges, they define it as the balance point between the individuals' resource pool and the challenges they face. Ryff and Singer (1996) posit that psychological wellbeing is made up of six dimensions in which a high degree of mastery of a dimension indicates positive psychological wellbeing.

The World Health Organization has presented a picture of health as not only being the absence of illness but to also include a state of positive health in mental, physical and social states (Kortum, 2014). Psychological wellbeing falls under the salutogenic orientation which is promoted for its emphasis on studying health as opposed to illness (Antonovsky, 1996). The salutogenic approach engender a positive health state which is noted to be cost effective. Wellbeing can be

understood from three different levels (Warr, 2012). The first level, considered a global one has no restrictions or context. The second level focuses on a specific domain of one's life such as positive relations with others while the third level focuses on a particular aspect of a certain domain of wellbeing. This research focuses on psychological wellbeing on the second level and explores domains of psychological wellbeing among prosecutors in Botswana.

2.3 Occupational Stress

Stress is a circumstance that disturbs or is likely to disturb the normal physiological or psychological functioning of a person (Sadock & Sadock, 2007). It is the arousal of the mind and the body in response to demands made on them by unsettling conditions or experiences (Seifert, Hoffnung, & Hoffnung, 2000). The human stress response is said to be a multidimensional, interactive process and differs for each individual (Everly & Lating, 2013). Stressor events set the stage for the elicitation of a stress response; the events themselves do not cause the stress response. The individual, by means of cognitive appraisal and affective integration, appraises the stressor event, appraisal being the interpretation of an event or situation with respect to one's attitudes, values and well-being (Kopp, 2007). Cognitive appraisal, according to Everly & Lating (2013), is the result of the cognitive interpretation of the meaning of the world as it unfolds, influenced by felt emotion. Appraisal is followed by neurological triggering mechanisms, which consist of the locus ceruleus, limbic system and hypothalamic efferent triggering complex in the brain. The structures are where there are instinctive and somatic efferent discharges in response to emotional arousal, giving rise to the stress response (Everly & Lating, 2013).

The stress response consists of complex physiological processes in the human body (Everly & Lating, 2013). The General Adaptation Syndrome states that the human body's response to a stressor as having three stages as follows: alarm; resistance; and exhaustion. During the alarm

stage, there is a generalised stimulation of the autonomic nervous system. A non-specific breakdown of resistance occurs; sympathetic nervous system activity is suppressed, accompanied by a decrease in muscle tone, hypotension and hypoglycaemia (Rice, 2011). The body shuts down non-essential functions and focuses its energy reserves on functions essential for the survival of the organism. The resistance stage is characterised by a dramatic reduction in the alarm reaction as full resistance to the stressor is being established. Developmental adaptation occurs in tissues that must intensify their characteristic functional activity for the body to transcend the stressor. There is an attempt to maintain a higher level of functioning in the presence of the stressor (Rice, 2011). Simply put, during the resistance stage, the body attempts to adapt to the stressor though it remains at a heightened level compared to normal functioning. The resistance stage can be viewed as an attempt at survival through a carefully balanced use of the body's system to facilitate coexistence between the organism and the stressor (Selye, 1976a) as cited by (Rice, 2011). The final stage in the general adaptation syndrome is the exhaustion stage. If the organism is not able to return to a normal level of resistance, exhaustion sets in. The symptoms of this stage are similar to those of the initial alarm reaction stage, but the high level of resistance cannot be maintained and resources become depleted. Permanent damage to the system, through wear and tear or death or both may occur (Rice, 2011). The neural, neuroendocrine and endocrine constituents of the stress response activate, increase or inhibit normal activation, or catabolise an organ system in the body. The subsequent emergence of clinical signs and symptoms are how the presence of excessive stress arousal owing to this stress response are deduced (Everly & Lating, 2013).

People react differently to stressors, and different kinds of psychological stress states are brought about by different antecedents or precursor conditions, both in the environment and within the person, and have different consequences (Lazarus, 1993). It is through these complex

physiological processes that stress affects the individual. The continued experience of stressors can have debilitating effects on the human body and its organs. There are cardiovascular consequences such as the heart pumping faster, leading to heart diseases and high blood pressure, and irregular stomach secretions, leading to gastro intestinal problems such as ulcers, which have been linked to occupational stress (Huerta-Franco *et al.*, 2013).

Stress that is a result of an individual's work or employment, is referred to as occupational stress, it is the physical and emotional responses that happen when capabilities and resources of the person are exceeded by the demands placed upon them (Mohajan, 2012) . Individuals spend a large part of the day at work in environments that can be stressful. The individual can face a great deal of pressure and challenges that have a variety of physical, social and emotional consequences. Psychosocial hazards such as longer working hours and higher performance expectations contribute to an increasingly stressful work environment (International Labour Organisation, 2016) .

2.3.1 Causes of occupational stress

Stressors can be intrinsic to the job such as work overload and time pressure (Leka, Griffiths, & Cox, 2003). Stressors can also occur due to one's role in the organisation such as role conflict, role ambiguity, responsibility for other people and career development (with regard to promotion and fulfilled ambition, relationship at work with supervisors and colleagues, subordinates and organisational structure and climate such as individuals' extent of participation in decision-making and office politics) (Leka *et al.*, 2003). These stressors are events and work characteristics that affect individuals through a psychological stress process, rather than a physical one (Ganster & Rosen, 2013). The International Labour Organisation (2016) describes work content and work context as the causes of occupational stress. Work content comprises the work

environment, equipment, state of facilities, full utilisation of skills, and amount of control over workload and work schedules. Work context consists of the function and culture of the organisation, individuals' role in the organisation and if there is any role conflict or ambiguity. Having a say in the decision-making process, career development, interpersonal relationships and work-family conflict are other factors under work context that contribute towards work stress (International Labour Organisation, 2016).

Nixon, Mazzola, Bauer, Kreuger, and Spector (2011) focused on relationships between various work stressors and self-reported physical complaints such as backache, headache, eyestrain, sleep disturbance, dizziness, fatigue and gastrointestinal problems. All seven work stressors included in Nixon and colleagues' (2011) meta-analysis (interpersonal conflict, lack of control, organisational constraints, role ambiguity, role conflict, work hours and work load) were statistically significant and were found to have modest correlations with physical symptoms experienced due to stressors. For the purposes of this study, focus was on occupational stressors such as role ambiguity, role conflict, perceived employment opportunities, intra-group and inter-group conflicts.

Perceived employment opportunities explores the level of ease or difficulty that the individual would have to obtain alternative employment outside of their current organisation, and is defined as the perception of the ease or difficulty which the individual would experience to find new employment (Kirves, 2014). Kirves (2014) found that among permanent employees, indicators of well-being positively related to individuals' perceptions of their ability to obtain employment outside of the current organisation did not depend on the kind of contract that the individual had. This is because the individual has control over his or her career. Kirves (2014) also

found that employees who rated lowly their employability, reported poor well-being at work in general.

Bernhard-Oettel, De Cuyper, Berntson, and Isaksson (2008) found that positive relations between job preferences and well-being, finding a positive relation between job preference and better general health, higher levels of life satisfaction, commitment to the organisation had reduced turnover intentions among permanent workers. When individuals were in their preferred job, they were likely to have better general health and stay within the organisation. Among Malaysian engineers, the perception of career goal development influenced the engineers' career satisfaction and psychological well-being (Rahim & Siti-Rohaida, 2015).

Role dynamics of which role ambiguity and role conflict are, regard stress as a result of conflicting or incompatible expectations or vague expectations Khan (1964) as cited by (Rahim, 2010). Boyd (1995) notes that stress evolves as a result of the interaction between the individual and the work environment. Prosecutors interact with different professionals such as police officers across different contexts posing competing interests which are likely to exist causing stressful effects for the prosecutors.

Role ambiguity is defined as lack of clarity in the expectations that exist for a specific role (Khan *et al.*, 1964 as cited by (Rahim, 2010). Manshor, Fontaine, and Chong (2003) state that role ambiguity is most evident when there is not clear picture of the objectives, scope and responsibilities of one's job and the expectations of their colleagues. There is inadequate information for individuals regarding expectations for their role, how to achieve these and the consequences for performing the role. This can result in individuals having a negative perception of themselves, thus affecting their view of themselves as they do not have clear feedback about their responsibilities and performance (Ahmady, Changiz, Masiello, & Brommels, 2007). Role

conflict is defined as a set of two or more pressures occurring simultaneously such that complying with one would make it difficult or impossible to comply with the other (Kahn *et al.*, 1964 in Rahim, 2010). The goals, policies and decisions of organisations can generate a high degree of role conflict (Rahim, 2010).

Mohd Yunus and Mahajar (2011) found role ambiguity and role boundaries amongst others to be stressors that have a significant relation and influence on psychological well-being (finding them to negatively impact it). Similar results were found in a study among prosecutors, heavy workload and role ambiguity negatively affected psychological well-being among prosecutors (Na *et al.*, 2017). Ikonne (2015) found role ambiguity, role conflict and work environment as having significant positive relationships with psychological well-being. The study, however, was conducted among a sample of librarians.

Conflict is a factor in the workplace that always exists. Conflict is related to impaired psychological well-being (Meier, Semmer, & Gross, 2014) as it negatively affects the physical and psychological well-being of employees (Danna & Griffin, 1999); it also hurts the health and well-being of individuals when not resolved (Carsten, van Dierendonck, & Dijkstra, 2004). Interpersonal conflict is prevalent in the workplace and is a leading source of workplace stress (Donais, 2006).

Intra-group conflict refers to a collective incompatibility or disagreement between members of the same group, with regard to their goals as well as activities of their group (Rahim, 2010); it is conflict with others within the work group. Inter-group conflict refers to a collective incompatibility or disagreement between two or more divisions, departments or subsystems in connection with tasks, resources and information (Rahim, 2010); it is essentially conflict between different work groups. Schmid and Muldoon (2013) observed that individuals exposed to high

levels of inter-group conflict, reported poor levels of psychological well-being although it was only significant when the levels of conflict were very high. Intra-group conflict was found to have a negative relationship with well-being and the likelihood of the individual leaving the organisation also increased (Medina, Munduate, Dorado, Martínez-Corts, & Guerra, 2005). Inter-group and intra-group conflicts in these studies were found to have a negative impact on psychological well-being. Intragroup and Intergroup conflict increase distress at work (Inoue et al., 2010).

Psychological problems including mood disorders and relational problems were higher in lawyers and against the general population and in some instances one in three lawyers would suffer from depression (Daicoff, 2011; Marcus, 2014), as previously alluded, to similar results that prosecutors suffer from depression at triple the rate of non-prosecutors were found (Austin, 2014).

The more common problems faced by prosecutors include bullying in the workplace and poor relations with colleagues (Briton, 2009; Daicoff, 1998). Heavy workloads with role conflict, role ambiguity and the amount of organisational support received by prosecutors from superiors and co-workers, play the most important roles in explaining the variation in the psychological and emotional well-being of prosecutors (Na *et al.*, 2017). It is reported that work-related stress can cost an equivalent of 2.2% of the gross domestic product of South Africa (Reporter, 2016).

Botswana has become more developed and industrialised since gaining independence. Industrialisation has led to increasingly changing work conditions and demands on the worker, particularly in developing countries as occupational health and safety priorities have changed during the last decade (Kortum & Leka, 2014). Optimal performance is expected from employees to fulfil this expectation, it is imperative that the individual be of sound mind and body, and to essentially be in a state of optimal well-being. Negative work environment perception and increased demand could be associated with occupational stress (Dewe, O'Driscoll, & Cooper,

2001). Research studies have provided empirical evidence that indicates that the experience of occupational stress leads to changes in physiological, psychological and behavioural functions, which may be detrimental to individual health, organisational and national productivity (Lundberg & Cooper, 2010).

2.4 Resilience

Resilience, in its definition, has on different occasions, been defined as a trait, a process or outcome (Harrop, Addis, Elliot, & Williams, 2009). It has been defined as a psychological process developed in response to intense life stressors that facilitate healthy functioning (Johnson *et al.*, 2011), the absence of psychopathology or the presence of competence in the context of significant adversity (Kim-Cohen & Turkewitz, 2012) or humans' ability to bounce back and even thrive in the face of serious life challenges (Baumgardner & Crothers, 2010). These definitions of resilience share a common meaning, focusing on a good outcome, following significant life challenges and adversity. Positive adaptation and risk are two important constructs in the conceptualisation of resilience (Harrop *et al.*, 2009). There is some consensus that for resilience to be inferred, there must be positive adaptation despite the presence of significant risks to the person. Previous research has mostly focused on children and adolescents, with a resultant paucity of research among adults (Wagnild, 2013).

Understanding how resilience can be developed and enhanced upon should promote coping and mitigate maladaptive ways of coping and stress responses to stressful events that individuals experience (Wood & Bhatnagar, 2015; Wu *et al.*, 2013). Resilience is attributed to a number of mechanisms (Wu *et al.*, 2013). These include, epigenetic developmental, psychological and neurochemical factors that develop and modulate resilience in an integrated manner. The suggested concepts by Wu *et al.*, (2013) bear close similarity to those described by Southwick and Charney

(2012) who attribute resilience to genetic, developmental, neurobiological and psychosocial factors. Other studies have attributed resilience mechanisms to include genetic (Feder, Nestler, & Charney, 2009), epigenetic (Zannas & West, 2014), developmental (Masten & Barnes, 2018), psychological (Levine, 2003) and neurochemical (Feder et al., 2009) factors that underscore the development and enhancement of resilience factors.

Individual characteristics considered to affect resilience include optimism, cognitive reappraisal, active coping and mindfulness (Wu et al., 2013). Concerning workplace resilience, mindfulness, self-efficacy, coping and neuroticism were the resiliency constructs identified. lends weight to these assertions as the researcher found a relationship between high intellectual functioning, efficient self-regulation, active coping styles and the ability to endure extremely stressful situations.

A resilient workforce is said to work well under pressure and to deal with changes quickly (Rees, Breen, Cusack, & Hegney, 2015). Organisations that have resilient individuals have higher engagement and productivity, are flexible and work well together, have low absenteeism rates and retain their employees as they do not resign (McDonald, 2014).

2.5 Occupational stress, resilience and psychological well-being

Literature on occupational stress in Botswana is limited to studies carried out among police officers, health care workers, university employees and nurses (Agolla, 2009; Fako, 2010; Government of Botswana, 2006; Plattner & Mberengwa, 2010). These studies cite lack of job clarity, performing work outside one's job description, lack of resources, work overload, lack of control, insufficient reward, absence of fairness and conflicting values among others as stressors. These studies provide empirical evidence that indicates that the experience of occupational stress

leads to changes in physiological, psychological and behavioural functions, which could be detrimental to the organisation and national productivity (Lundberg & Cooper, 2010).

Lindfors, Berntsson, and Lundberg (2006) found that among highly educated women and men, unpaid work was associated with decreasing levels of self-acceptance and environmental mastery in women, though this was not the case for men. The psychosocial characteristics of paid (formal employment) and unpaid (childcare and household duties) workload of men and women, respectively may explain why there were gender specific patterns of psychological well-being and symptoms (Lindfors *et al.*, 2006). The researchers also found that paid work was associated with increasing levels of personal growth in both females and males, though it was also associated with decreasing levels of purpose of life in females. The authors surmised that reduced control in females could be related to stress resulting from conflicting demands from work and family domains such as child care and daily household chore responsibilities. Although the study looked at work in general it could not address explore specific occupational stressors.

Culture seems to have an effect on the experience of psychological well-being in relation to work. Song, Marks, and Han (2007) found differences in mental health where psychological well-being was one of the components considered. The authors found that steady employment was associated with better mental health regardless of the country. However, more work pressure was associated with females' poorer mental health. Having greater leeway to make decisions was also associated with better mental health.

In a work environment, psychological well-being and occupational stress seem to have a relationship. Job demands and organisational support were found to play the most important roles in explaining the work stress of prosecutors (Na *et al.*, 2017). The authors found that structurally-oriented and systematically-oriented work conditions such as heavy workloads in the presence of

role conflict and role ambiguity, along with the amount of available organisational support to prosecutors superiors and co-workers, played the most important roles in explaining the difference in the psychological and emotional well-being of prosecutors (Na et al., 2017).

Studies examining average job satisfaction within organisations have produced strong evidence of a link between well-being and performance (Daniels & Harris, 2000). Among police officers in the North-West Province of South Africa, along with job satisfaction, burnout and work engagement, occupational stress was one of the variables that predicted work-related well-being (Rothmann & Jackson, 2005). De Fatima Antunes Alves Costa and Crstina Ferreira (2014) found that psychological demands due to work were an important predictor of stress. The researchers identified seven stressors as follows: decision latitude; psychological demands at work; physical demands at work; relationships with clients; job insecurity; social support from colleagues; and ergonomic stressors (De Fatima Antunes Alves Costa & Crstina Ferreira, 2014). The authors found that increased usage of skills and greater decision power was reported to be associated with a tendency to feel less dissatisfied with work and less chances of getting depressed. Gender and psychological demands at work, ergonomically uncomfortable demands, job insecurity and social support were found to significantly predict job dissatisfaction, depression and somatic problems (De Fatima Antunes Alves Costa & Crstina Ferreira, 2014).

Uncomfortable emotional reactions affecting short- and long-term behaviours were elicited due to work stress among police officers in Nigeria (Adegoke, 2014). Mohd Yunus and Mahajar (2011) found that among government officers, the higher the stress score, the lower the level of psychological well-being. These results are similar to those that found similarities among fire fighters in the United Kingdom and Malaysia, where the higher the stress level, the lower their well-being. Heavy workloads were a significant stressor for teachers, which affected their

psychological well-being (Buhare *et al.*, 2016). Occupational stress increases the likelihood of employees resigning (Gok, Akgunduz, & Alkan, 2017), thereby affecting staff retention in an organization. The ease or difficulty of obtaining alternative employment is a factor that affects psychological well-being. Kirves (2014) found a positive association between perceived employability and employee well-being, as individuals' ability to obtain employment went up, their well-being also went up.

A strong link was found between well-being, mental health and resilience (Kansky & Diener, 2017). The authors reported that resilient individuals are better able to withstand change in the organisation and adapt. Having more resilience mechanisms related positively with psychological well-being among nurses (Dias Abreu & Rodriguez Blanco, 2017). Promoting health is important for psychological well-being. Resilience seemed to influence psychological wellbeing (Souri & Hasanirad, 2011). Other studies found a positive relationship between psychological well-being domains and resilience (Dias Abreu & Rodriguez Blanco, 2017; Sagone & Caroli, 2014; Young, 2018).

2.6 Theoretical Framework

2.6.1 Theories related to Psychological Well-being

Psychological well-being has been theorised from several different theoretical bases (Coffey, Wray-Lake, Mashek, & Branand, 2016). Wissing and van Eeden (2002) argue that there are several perspectives, models and constructs, that have been developed, and whose aim is an attempt to grasp the essence and characteristics of psychological well-being. The authors maintain conceptualisations of psychological well-being are diverse and on different levels of abstraction as an analysis of perspectives, models and micro-level constructs indicate lack of clarity to the extent that these constructs and models refer to the same or to different aspects of perception,

cognition, experience, behaviour, attitudes or ways of functioning. The following are some of the theories on psychological well-being:

2.6.1.1 Well-being Theory (Seligman, 2011)

Seligman (2011) states that well-being cannot be defined by a single measure, but is rather, composed of various aspects that are readily measured. Seligman (2011) elaborates on five elements that are the core of psychological well-being and happiness. The author opines that these elements can be applied to help people develop new cognitive and emotional tools to facilitate positive psychological well-being. The dimensions of the Well-being Theory are positive emotions, engagement, positive relations, meaning and accomplishment. Positive emotions refer to hedonic feelings of happiness. Engagement is when there is a psychological connection to activities and organisations. Positive relations refer to feeling socially integrated, cared about and supported by others and satisfied with one's social connections. Meaning refers to believing that one's life is valuable and feeling connected to something greater than oneself, while accomplishment involves making progress towards goals, feeling capable to do daily activities and having a sense of achievement. The Wellbeing Theory was found to be a useful predictor of flourishing in different studies (Coffey et al., 2016).

2.6.1.2 Broaden and Build Theory

The Broaden and Build Theory (Fredrickson, 2004) attributes well-being to positive emotions that individuals have. Fredrickson (2004) postulates that positive emotions seem to broaden thought-action repertoires and engender enduring personal resources. Positive emotions broaden the type of skills and behaviours the person will regularly use, which broadens the array of thoughts, and actions that come to mind and links positive emotions to psychological resilience; the individual has access to a wider number of thought processes on possible actions to pursue in

a given situation. Seligman (2011) writes that the broaden and build theory explores positive emotions which provide enduring psychological resources that can be called on at later points in life.

2.6.1.3 Theory of Psychological Well-being

Ryff and Singer (1996) also proposed a model of psychological well-being. The authors believe the framework of psychological well-being is based on the constructs of autonomy, environmental mastery, self-acceptance, purpose in life, personal growth and positive relations with others. This model is similar to the Wellbeing Theory by Seligman (2011) as it is multidimensional.

Self-acceptance involves acceptance of both the current self and the past self, and is an indication of achieving integration (Ryff & Keyes, 1995), a low scorer does not accept themselves and wants to be someone else. The individual has a positive attitude towards themselves. With regard to **positive relations with others**, one has warm, close and trusting interpersonal relationships with others. The individual also has strong empathy for others while a low scorer is isolated. **Autonomy** is defined as evaluating oneself by one's own personal standards. The person exhibits self-regulation and self-determination (Ryff and Keyes, 1995). The individual who is a high scorer in this domain is an independent thinker while low scorers are likely to conform. **Environmental mastery** is when the individual actively manages aspects of their life to best suit their preferences and needs. This includes feeling in control of one's life and taking advantage of environmental opportunities (Ryff and Keyes, 1995). The person feels fully capable of managing complex environments and can choose or alter them when necessary while low scorers tend to feel out of control and cannot cope with life's daily demands. **Purpose in life** is the feeling of having determination and meaning of life, the individual recognises their goal in life, has a sense of

direction and intends to achieve this goal while a low scorer has no clear direction in their life. **Personal growth** refers to the continuous development of one's potential; the individual feels an increase in knowledge and continues to improve oneself and expand as a person and improve over time. Individuals take on new challenges and tasks, are open to new experiences and gain more knowledge about themselves while a low scorer feels they have stagnated personally. Personal growth is an important dimension of well-being that encompasses all the other dimensions of well-being.

The psychological well-being scale is one of the most widely used psychological well-being assessment tools and was used in this study, since it is considered a good measure to adequately cover the areas that contribute to well-being. Psychological well-being is compromised when negative emotions are extreme or very long-lasting. As indicated in the literature, this interferes with a person's ability to function in his or her daily life (Hupert, 2009). The implications of this are better understood when observing people with higher psychological well-being. They show greater flexibility and originality, respond better to unfavourable feedback, make more positive judgments about others, show higher levels of engagement, are more productive, are likely to live longer, be sick less often and have a happier work and home life (Robertson & Cooper, 2010).

With regard to Ryff and Singer (1996) model of psychological well-being, it is observed that the concept has elements of the eudemonic school of thought in terms of happiness, which is considered a more theoretically reliable area of the happiness construct in psychology as opposed to the hedonic school of thought in terms of describing happiness (Baumgardner & Crothers, 2010). This model is drawn from the eudemonic approach, unlike the hedonic approach. It goes beyond focusing on experiencing pleasure and being happy in life and takes into account ones

development, their functioning in life, and an evaluation of how they feel with regard to the interaction with one's self and the environment. This model will be used to anchor the study.

2.6.2 Theories related to occupational stress

The occupational stress theories are as follows:

2.6.2.1 The Transactional Model of Stress

The Transactional Model (Holroyd and Lazarus, 1982) cited in (Dewe, O'Driscoll, & Cooper, 2012) consider stress as arising from the appraisal that particular environmental demands places on individual resources, thus threatening the well-being of the individual (Holroyd and Lazarus, 1982 cited in (Dewe et al., 2012). According to the theory, individuals' experience of stress in the workplace is a result of how a situation is appraised and on the availability of resources to handle it. The relationship with the environment is interpreted by taking into account objects, persons, situations and their surroundings (Lazarus & Folkman, 1984).

2.6.2.2 The Person Environment Fit Theory

The person environment fit theory is a model introduced by Lewin (1935) and followed by Murray (1938 cited in Dewe *et al.*, 2012). The premise is that stress in the workplace is a results from a misfit between people (P) and the environment (E) (Dewe *et al.*, 2012). This theory posits that there is a misfit between P and E when the working environment does not suit the worker, resulting in occupational stress, which in turn, leads to poor well-being. The person's values and attitude may be at odds with the environment he or she is in and thus, a stressful situation prevails. The misfit can affect thinking, feelings and behaviour (Dewe *et al.*, 2012). For one to function effectively, there should be an optimal fit between the person and the environment (Aftab & Idrees, 2012).

2.6.2.3 The Effort Reward Imbalance Model

Siegrist (1996) posits that failed reciprocity, wherein high efforts expended while low rewards are received, are likely to elicit recurrent negative emotions and a sustained stress response in the individual. The theory states that work should be compensated by suitable rewards, and a mismatch between these leads to stressful experiences (Peter & Siegrist, 1999). Stress occurs as a result of the individual expending high efforts while in turn, receiving insufficient rewards from the organisation. The individual functions most effectively in an environment where rewards are commensurate with the efforts expended, monetary or otherwise.

2.6.2.4 National Institute of Occupational Safety and Health (NIOSH) Model of Job Stress

The NIOSH model of job stress (Hurrell & McLaney, 1988) considers work conditions referred to as job stressors as the primary contributors in causing job stress. The model also proposes individual factors and non-work factors as causing stress. It also presents buffer factors that mediate between the stressor condition and the amount of stress ultimately experienced by the individual. The model identifies 13 stressors as well as individual and situational factors that can toughen or weaken the experience of stress. These are identified as individual and buffer factors. The stressors identified are physical environment, role conflict, role ambiguity, interpersonal conflict, intra personal conflict, job future ambiguity, job control, perceived employment opportunities, quantitative workload, responsibility for others, skill utilization, cognitive demands and shiftwork.

2.6.3 Theories related to resilience

A number of theories related to resilience have been proposed by various researchers (Frederickson, 2004; Ungar, 2011). The underlying notion behind most theories of resilience is the fact that resilience is a dynamic process that changes over time. In addition, these theories consider

that resilience interacts with a wide range of factors that determine whether an individual demonstrates resilience or not.

2.6.3.1. The Transactional Resiliency Model (Kumpfer, 1999)

The resilience model by Kumpfer (1999) is a transactional model of resilience that attributes resilience to a number of interacting factors in individuals and their environment. It highlights four domains of influence with another two important areas in the resilience model. The first domain is the stressor event experienced by the individual, which disrupts homeostasis for the individual or the community. A consideration of the environmental context and the risks and protective features it offers and how they balance out, is important. The second domain is the interactional process between the person and the environment and consists of the active or passive perception and reaction difficulties experienced and a move towards creating a conducive environment for the individual. The third domain considers individuals' personal competencies that allow them to successfully navigate the environment and culture they reside in. The next domain in the transactional model of resilience is the resiliency process, being individuals' immediate and long-term resilience and coping process, which they have learned from gradual exposure to different stressors that allow them to continue functioning positively. A final factor to consider is the positive life outcome or reintegration and adaptation in specific areas, which thus, lay a foundation that can be used in future for further positive outcomes in later life. The model drew from different research designs that explored each of the stated domains and factors (Kumpfer, 1999). The resilience model was supported by Bowleg, Huang, Brooks, Black, and Burkholder (2003), finding that it was a predictor of resilience in a study on stress and resilience. The transactional resilience model was further validated as it predicted a large proportion of the

variance in the quality of life of spinal cord injury patients (Tansey, Bezyak, Kaya, Ditchman, & Catalano, 2017).

2.6.3.2 Ecological Model Of Resilience (Ungar, 2011)

According to this model, resilience is due to a complex interaction between the person and the environment. According to Ungar (2011), positive growth in less than ideal conditions, can be predicted by how well elements of the mesosystem (family, school and community at large) interact with one another. The model takes into account four principles as follows: decentrality; complexity; atypicality; and cultural relativity. Decentrality is the understanding that resilience is not an inherent trait or characteristic within individuals, and that explanations of resilience should describe both individuals and social ecological contributions. Complexity in resilience comprises intricate, non-simplistic processes, which vary at different points in time, across cultures, and across and within contexts. It also takes into account atypicality, which highlights that resilient behaviour is understood from the context where it occurs rather than through interpreting it through a mainstream lens. Cultural relativity posits that the adaptive behaviour of a resilient individual is to be understood in relation to the cultural context. These principles widen understanding positive development under stress. The ecological conditions that contribute to good growth under adversity should provide further insight into resilience (Ungar, 2011). Refocusing on resilience means that health care recognises the strengths and develops ways to build up on existing capabilities (Wagnild, 2009). The ecological model takes into account the environment of persons and the resources around them.

2.7 Summary of chapter

Occupational stress and resilience are relevant to the psychological wellbeing of employees. The Ryff model of psychological wellbeing (that anchors the current study) follows

previous studies that investigate the interaction of occupational stress, resilience and psychological well-being, as well as the predictive ability of occupational stress and resilience in relation to psychological well-being. With regard to the model of job stress and health, the factors in the work environment may cause individual stress, which in turn, affects psychological well-being. Occupational stressors and their impact on psychological well-being have been studied in many Western countries. However, the existence of such research in Africa is still limited, particularly in Botswana. The next chapter is the research methodology.

CHAPTER THREE

METHODOLOGY

The following chapter presents the method used to carry out the study. It will cover the research approach, research design, participants, measures, data collection procedure and data analysis. The chapter will conclude with a discussion of the ethical concerns.

3.1 Research approach

A quantitative approach was used in this study as it allowed for the discerning of any significant relationships between occupational stress, resilience and psychological wellbeing (Muijs, 2010). This chapter focuses on the research design, selection of participants, research procedures, data collection instruments and methods of data analysis. The chapter also provides a discussion on ethical considerations.

3.2 Research design

Research design is a blueprint for research and is often used for explanation or for theory testing (Rovai, Baker, & Ponton, 2014). A non-experimental correlational research design was used in this study. This method was selected in order to identify the characteristics of the phenomena and variables under study, and to explore whether the experiences of occupational stress and the resilience of individuals affect the psychological well-being of prosecutors (Rovai *et al.*, 2014). The following are the predictor variables of interest in the study: occupational stressors; intra-group conflict; inter-group conflict; perceived employment opportunities; role conflict; role ambiguity; and resilience. Psychological well-being, autonomy, environmental mastery, personal growth, purpose in life, positive relations with others and self-acceptance were the dependent variables in the study.

3.3 Respondents

A convenient sample of prosecutors employed by DPP were used as respondents in the study. The sample consisted of men and women employed by the Department of Public Prosecutions in Botswana who worked as prosecutors and prosecuted cases. Both the support staff and those who were not present during data collection were excluded. Forty eight females and forty four males participated in the study. Participants were aged between 24 and 57 years ($M=33.6$, $SD=8.12$) and they were all black.

3.4 Measures

Data was collected using a questionnaire that consisted of sections. The questionnaire was divided into three different sections comprising of different scales of the Ryff Scale of Psychological well-being, Resilience scale and NIOSH Generic Job Stress Scale (See appendices A, B and C). Demographic questionnaire was used to obtain characteristics of respondents. This section solicited information on gender, age, marital status, if they live with children at home, qualifications, number of years the individual had been employed with DPP and the employment status of respondents.

3.4.1 Ryff Scale of Psychological well-being

Ryff's (1995) Scale of Psychological well-being was used in this study. The scale has a 42, 54 and 84 item version; the 42 item version was utilised in this study. It is a likert type scale that ranges from 1 to 6 where 1 was strongly disagree while 6 was strongly agree. Respondents chose the level to which they agreed with a statement. The scales provide a richer and multidimensional view of psychological well-being (Winefield, Gill, Taylor, & Pilkington, 2012). High scores in an area indicates a high degree of mastery in the domain for the individual. The Ryff Scale of Psychological well-being measures six constructs namely; autonomy, environmental mastery, self-

acceptance, personal growth, positive relations with others and purpose in life. The measure was scored by summing the items for each construct. The measure has been used internationally and regionally. The scale possesses a test-retest reliability of 0.82 and internal consistency coefficients 0.86–0.93 (Ryff & Singer, 1996).

3.4.2 NIOSH Generic Job Stress Questionnaire

Job stress was measured using an adapted version of the National Institute for Occupational Safety and Health Generic Job Stress Questionnaire (Hurrell & McLaney, 1988). It has 22 different forms that can be elected to use according to the requirements of the study. Each form consists of a set of statements which tap into one or more factors. The forms comprise questions used to assess 28 factors, or characteristics that contribute to work-related stressors. The following forms were utilised in this survey after consideration of factors contributing to high vacancy rates in the DPP. It assessed five factors relating to job stress (inter-group conflict, intragroup conflict, perceived employment opportunities, role ambiguity and role conflict). This measure has been used internationally in different settings (Tsuno et al., 2009).

- Perceived employment opportunities subscale: Employment opportunity has a 5 point Likert type scale. Responses ranged from Very easy (1), Quite easy (2), Fairly easy (3), Not quite so easy (4) and Not at all easy (5). High scores indicated a high perception that it would not be easy for the individual to find a suitable job outside of DPP, while low scores indicated that it would be easy to find equally equitable employment outside DPP.
- Your job subscale: Your job assesses role conflict and role ambiguity and has 14 questions. Role conflict measures how often individuals believes they must violate a policy, rule or directive in order to complete their job, while role ambiguity assesses facets of the job that

are unclear or leave the individual with a perception of uncertainty. Some items were reverse scored while some were not. Eight of the items measured role conflict; the remaining 6 items were related to role ambiguity.

- Conflict at work subscale (inter-group conflict and intra-group conflict): The sixteen questions with regard to conflict at work assess group conflict; eight of the questions address inter-group conflict and eight assess intra-group conflict. The group conflict items used a five-point Likert scale and both inter-group and intra-group conflict factors consist of a combination of regular and reverse-scored items.

3.4.3 Resilience Scale (Wagnild and Young, 1993)

The Resilience Scale (RS) is designed to measure the degree of individual resilience (Wagnild & Young, 1993) or the capacity to withstand life stressors, and to thrive and make meaning from life challenges. It is a 25 item Likert type scale, and requires respondents to indicate the extent to which they agree or disagree with a particular statement; item responses range from 1 to 7. Higher numbers in the scale are indicative of greater resilience. . Item 15 of the scale reads: 'I keep interested in things'. This measure has had a wide application, and has been used with adolescents, younger and older adults (Windle, Bennett, & Noyes, 2011).

3.5 Data collection procedure

Ethics clearance was sought and granted by the North-West University Research Ethics Committee (NWU-00405-14-A9- Appendix E). Permission to conduct the study was obtained from the Director of Public Prosecutions. The researcher then secured a date and presented the aims of the study to the participants. The Director of Public Prosecutions together with the researcher obtained consent from the participants and it was indicated that they can withdraw at any time during the collection of data. Questionnaires were later distributed to prosecutors by a research assistant to complete at their convenience. Respondents were expected to complete

measures that required them to indicate their level of agreement with certain statements according to the instructions of the measure. The researcher collected the filled questionnaires on the agreed date. The questionnaire was solely in English.

3.6 Data analysis

Both descriptive and inferential statistical methods were used to determine if there was a relationship among occupational stressors, resilience and psychological well-being. Data was analysed using the Statistical Package for the Social Sciences (IBM, 2012). Descriptive statistics were used to describe the basic features of the data such as number of participants, age and gender as well as summarise and describe important characteristics of the data. For the inferential statistics, judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in a study and involves significant testing was conducted. In the current study, whether occupational stress and resilience have a bearing on the psychological well-being of prosecutors. The Pearson correlation measures was done to establish the degree of relationship between variables and to make inferences. A very high correlation ranges from 0.90 to 1, a high correlation ranges from 0.70 to 0.90, a moderate correlation ranges from 0.50 to 0.70, a low correlation ranges from 0.30 to 0.50 while a negligible correlation ranges from 0.00 to 0.30 (Mukaka, 2012). A linear regression analysis was used, where more than one independent variable is used to predict a single dependent variable (Maree & Pietersen, 2010); in this instance, occupational stress and resilience on psychological well-being.

3.7 Ethical considerations

The North-West University's guidelines stipulate that researchers conducting health research, involving human participants, need to consider the possible adverse impacts of their research on vulnerable groups and thus, have a duty to observe the highest possible standards to

protect the rights as research participants. The guidelines also stipulate that responsible health research not only makes a scientific contribution for the good of humans or animals, but is conducted in (Trochim, 2006) an ethical manner as well.

Some questions may prove to be of a sensitive nature to participants and necessitate that the researcher ensures that no harm be inflicted on the research participants. This was accomplished by seeking approval from the North-West University Ethics Committee and seeking permission from the Director of DPP (who was also the head of the Department).

Data was collected anonymously as there was no information on the questionnaire that could identify respondents so confidentiality was maintained. Prior to completing the questionnaire, respondents were given full information on what participation entailed thus they were informed prior to consent. Respondents were also informed that they could withdraw from the study at any point should they wish to do so with no penalty. A further area for consideration with regard to ethics was storing of data. Data was stored in a secure place. That only the researchers had access to. In the next chapter the results will be discussed.

CHAPTER FOUR

RESULTS

The study sought to investigate the relationship between occupational stress, resilience and psychological well-being among prosecutors. This chapter presents the results obtained from the analysis.

4.1 Demographic characteristics of respondents

There were 130 questionnaires sent out, 107 collected and finally 92 utilised in the analysis. The questionnaire was completed by 48 females and 44 males. The study participants were aged between 20 and 30 years (39), followed by those aged 31 to 40 years (27). Fifteen participants were aged 41 to 50 years while 3 were aged 51-60 years. Most participants were single (59) while only 33 were married. Twenty one respondents indicated they had children living at home while the rest had none. In terms of qualification, 23 respondents had a Diploma in Law, 65 had a Bachelor of Law (LLB) while 4 had a postgraduate qualification. With regard to the number of years the prosecutors had been employed, 26 had been employed for less than one year, 21 had been employed for two to five years, 29 had been employed for 6 to 10 years, five had been employed for 11 to 15 years while three had been employed for 16 to 20 years. With regard to the job situation, 76 respondents were employed on a fulltime permanent basis, two were employed on a full time temporary basis, one was employed on a part time basis while thirteen were employed under the Government Internship Programme.

The results revealed that the psychological well-being of prosecutors was influenced by occupational stress and resilience. Results of Bivariate correlation (Table 4.1) suggest that occupational stress and resilience are significantly correlated with each other; occupational stress

is negatively related to psychological well-being while resilience is positively related to psychological well-being.

4.2 Descriptive statistics

4.2.1 Occupational stress, resilience and psychological wellbeing

Table 4.1 presents the descriptive information on occupational stress, resilience and psychological well-being.

Table 4.1 Mean and standard deviation of variables in the study

	Factor	Mean	S.D
<i>Occupational stressors</i>			
	Perceived employment opportunities	2.9	0.94
	Role conflict	3.3	1.10
	Role ambiguity	2.53	1.16
	Intra-group conflict	2.61	0.85
	Inter-group conflict	2.55	0.77
<i>Resilience</i>			
	Resilience	143.17	17.55
<i>Psychological well-being</i>			
	Autonomy	31.74	5.33
	Environmental mastery	29.12	4.53
	Personal growth	34.52	4.76
	Positive relations with others	30.72	5.45
	Purpose in life	34.63	5.54

Self-acceptance	31.73	6.84
Psychological Well-being	192.48	24.39

A comparison of the mean scores across the psychological well-being subscales revealed that the highest score was the purpose in life subscale ($M=34.63$), followed by personal growth ($M=34.52$), autonomy ($M=31.74$), self-acceptance ($M=31.73$), positive relations with others ($M=30.72$) and environmental mastery ($M=29.12$), while overall, psychological well-being was ($M=192.48$).

4.3 Inferential Statistics

4.3.1 Bivariate correlation

Bivariate correlation coefficient was used to determine the relationship between variable of occupational stress, resilience and psychological wellbeing. Table 4.2 shows strengths of the correlations between the different variables. The table proves that none of the assumptions for correlation analysis was violated.

Table 4.2 Bivariate correlations of occupational stress, resilience and psychological well-being

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Per. Emp. Opp.	1												
2 Role Con.	.154	1											
3 Role Amb.	.357**	.324**	1										
4 Intragroup Con.	.299**	.389**	.560**	1									
5 Intergroup Con.	.285**	.386**	.477**	.733**	1								
6 Resilience	-0.133	.024	-.331**	-.154	-.271*	1							
7 Psych. Well.	-.434**	-.140	-.519**	-.500**	-.373**	.451**	1						
8 Autonomy	-.279**	-.032	-.328**	-.264*	-.202	.319**	.664**	1					
9 Env. Mast.	-.343**	-.058	-.443**	-.385**	-.268*	.341**	.764**	.448**	1				
10 Pers. Grw.	-.234*	.008	-.246*	-.247*	-.170	.277*	.679**	.268*	.356**	1			
11 Pos. Rel.	-.439**	-.056	-.449*	-.386**	-.337**	.346**	.746**	.330**	.614**	.395**	1		
12 Pur. Life	-.321**	-.262*	-.386**	-.415**	-.268**	.252*	.750**	.415**	.527**	.499**	.371**	1	
13 Self Acc.	-.330**	-.186	-.462**	-.506**	-.406**	.421**	.867**	.505**	.550**	.563**	.626**	.548**	1

Note: * $p < .05$ ** $p < .01$ N = 92 Per. Emp. Opp.=Perceived Employment Opportunities; Role Con.= Role Conflict; Role Amb.= Role Ambiguity; Intragroup

Con.=Intragroup Conflict; Intergroup Con.=Intergroup Conflict; Psych. Well. = Psychological Well-being; Env. Mast.= Environmental Mastery; Pers.

Grw.=Personal Growth; Pos. Rel.=Positive Relations; Pur. Life.=Purpose in Life; Self. Acc.= Self-Acceptance

Pearson's correlation analysis was conducted in order to examine the bivariate relationships between perceived employment opportunities, role conflict, role ambiguity, intra-group conflict, inter-group conflict, resilience and psychological well-being. The results in Table 4.2 reveal the following relationships:

Perceived employment opportunities was negatively correlated to autonomy ($r = -.28, p < .01$), environmental mastery ($r = -.34, p < .01$), positive relations ($r = -.43, p < .01$), purpose in life ($r = -.32, p < .01$) and self-acceptance ($r = -.33, p < .01$). Role conflict was negatively correlated to purpose in life ($r = -.26, p < .05$). Role ambiguity had a negative correlation with autonomy ($r = -.26, p < .05$), environmental mastery ($r = -.39, p < .01$), personal growth ($r = -.26, p < .05$), positive relations ($r = -.39, p < .01$), purpose in life ($r = -.42, p < .01$) and self-acceptance ($r = -.51, p < .01$).

Intra-group conflict was negatively correlated to autonomy ($r = -.31, p < .01$), environmental mastery ($r = -.46, p < .01$), personal growth ($r = -.26, p < .05$), positive relations ($r = -.45, p < .01$), purpose in life ($r = -.44, p < .01$) and self-acceptance ($r = -.53, p < .01$). Inter-group conflict was negatively correlated to environmental mastery ($r = -.27, p < .05$), positive relations ($r = -.34, p < .01$), purpose in life ($r = -.27, p < .01$) and self-acceptance ($r = -.41, p < .01$).

Resilience positively correlated to autonomy ($r = .32, p < .01$), environmental mastery ($r = -.34, p < .01$), personal growth ($r = -.27, p < .05$), positive relations ($r = -.34, p < .01$), purpose in life ($r = -.25, p < .05$) and self-acceptance ($r = -.42, p < .01$).

4.4 Hypotheses testing

The following hypotheses were tested to determine if there is a relationship between occupational stress, resilience and psychological wellbeing.

4.4.1 Hypothesis 1:

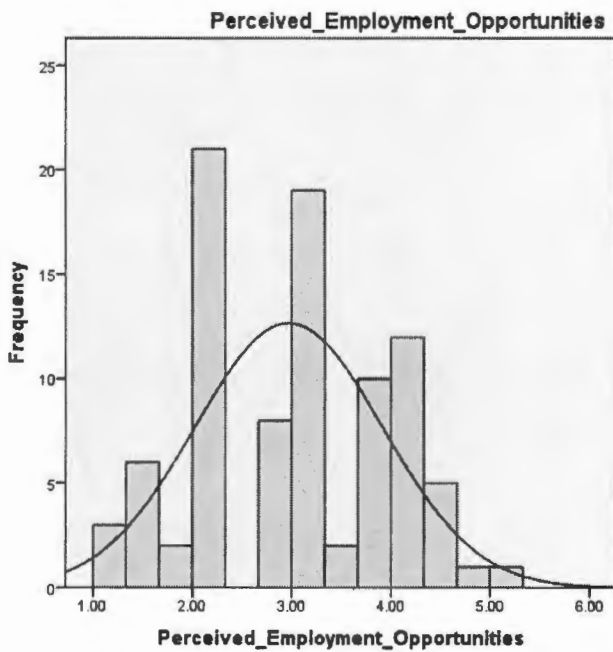
The first hypothesis tested the relationship between occupational stress (perceived employment opportunities) and psychological well-being.

Table 4.3 Relationship between occupational stress (perceived employment opportunities) and psychological well-being

Variable	Mean	SD	df	r	p-value
Perceived Employment Opportunities	2.97	0.94	90	-.434	.001

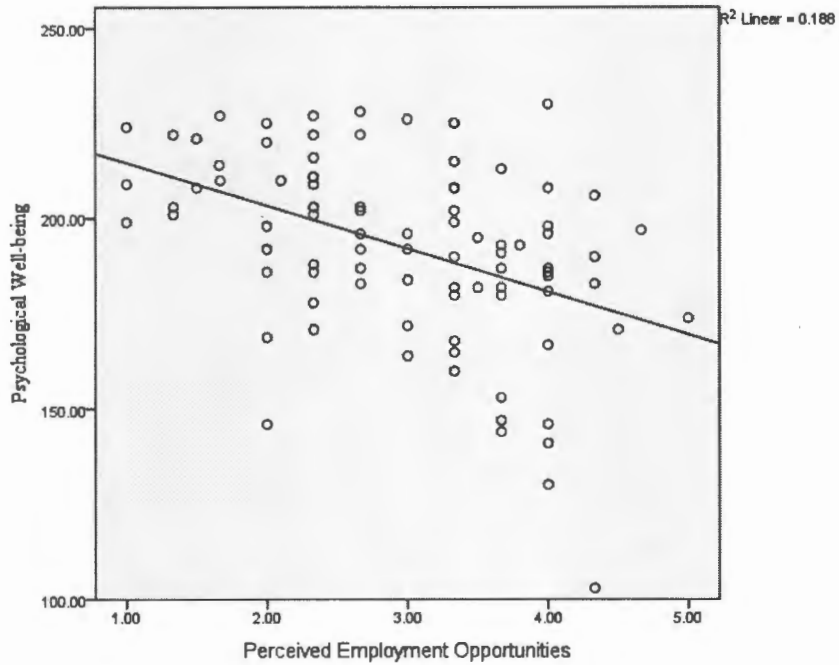
The results show that there was a weak negative relationship between perceived employment opportunities and psychological well-being ($r = -.434, p < .001$). The results further show that lack of similar employment outside DPP was a stressor for prosecutors, which negatively affected their psychological well-being.

Figure 4.1: Histogram of perceived employment opportunities



The figure shows that the data is normally distributed while the the scatter plot below shows a gradient that is not so steep, albeit negatively sloped. This implies that the stronger the perception that it will be difficult to obtain similarly equitable employment outside the DPP, the lower their psychological wellbeing.

Figure 4.2: Scatter plot of perceived employment opportunities and psychological well-being



The results in Figure 4.1 show a strong linear negative correlation between perceived employment opportunities and psychological well-being. This means that the individual perceives a particular difficulty to find similarly equitable employment outside the DPP. Based on the results, hypothesis 1 was accepted.

4.4.2 Hypothesis 2:

The second hypothesis tested the relationship between occupational stress (role conflict) and psychological well-being. The following results were obtained:

Table 4.4 Occupational stress (role conflict) and psychological well-being

Variable	Mean	SD	df	r	p-value
Role conflict	3.29	1.09	90	-.14	.194

These results show no significant relationship between occupational stress (role conflict) and psychological well-being, ($r = -.14$, $p < .194$). This is an indication that conflicting roles was not a stressor that had an effect on psychological well-being among prosecutors.

Figure 4.3: Histogram of role conflict

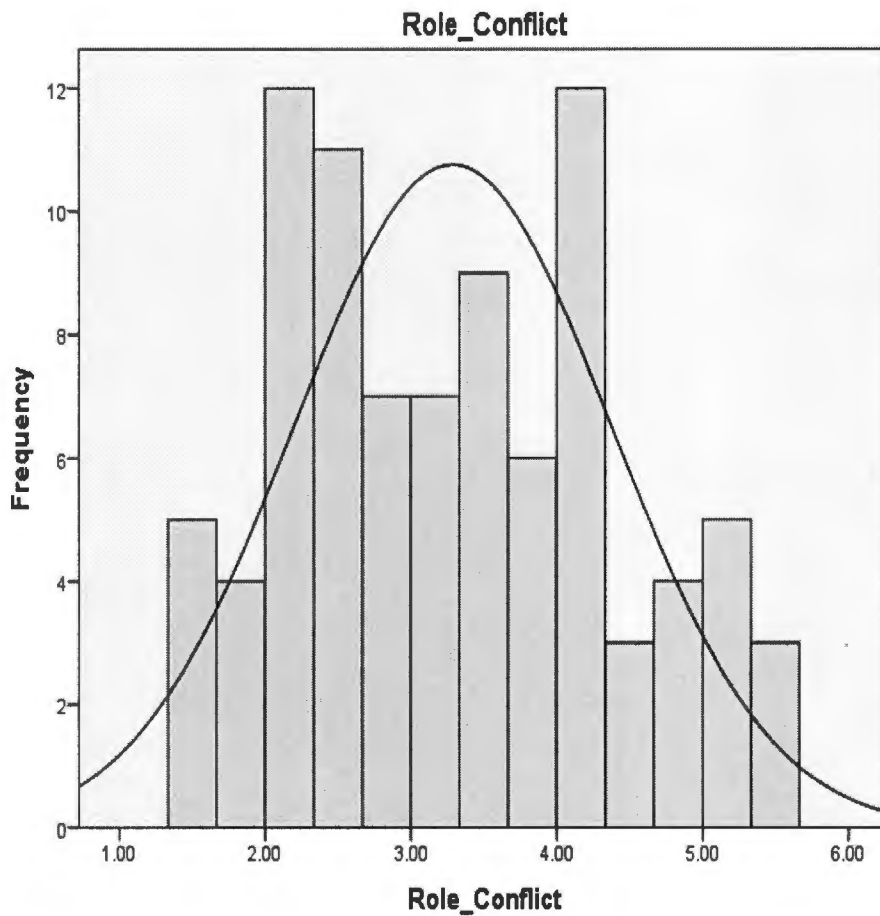
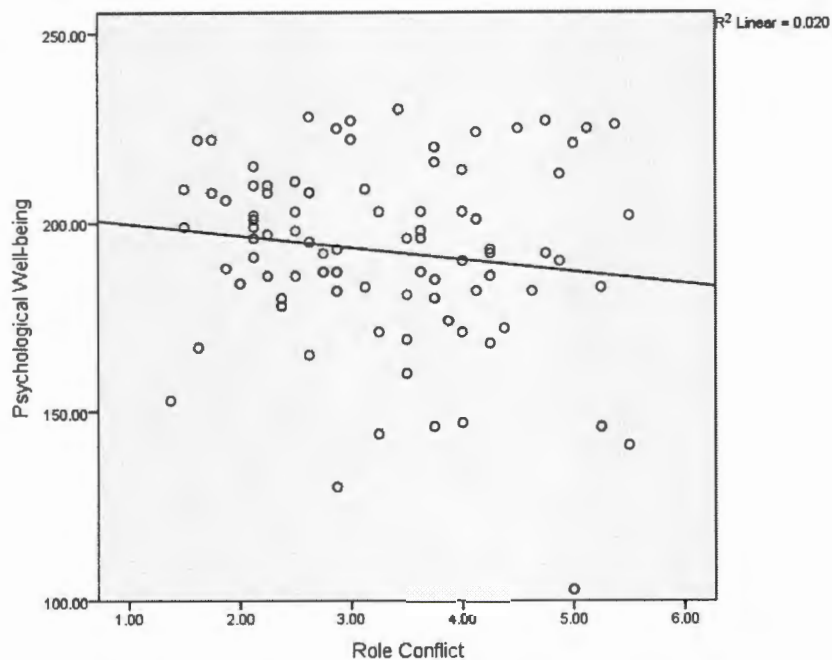


Figure 4.3 shows a rather symmetrical bell curve. Figure 4.2 shows a relatively flat gradient which implies that role conflict is not a significant variable to psychological wellbeing.

Figure 4.4: Scatter plot of role conflict and psychological well-being



The results in Figure 4.2 show a moderate linear negative correlation between role conflict and psychological well-being, thus hypothesis 2 was rejected.

4.4.3 Hypothesis 3:

The third hypothesis tested the relationship between occupational stress (role ambiguity) and psychological well-being. The following results were obtained:

Table 4.5

Occupational stress (role ambiguity) and psychological well-being

Variable	Mean	SD	Df	r	p-value
Role ambiguity	2.53	1.08	90	-.52	.001

According to the results, as role ambiguity went up, psychological well-being went down ($r = -.52$, $p < .001$). This is an indication that feelings of uncertainty regarding aspects of their job (by prosecutors) is a stressor that affected their psychological well-being.

Figure 4.5: Histogram of Role Ambiguity

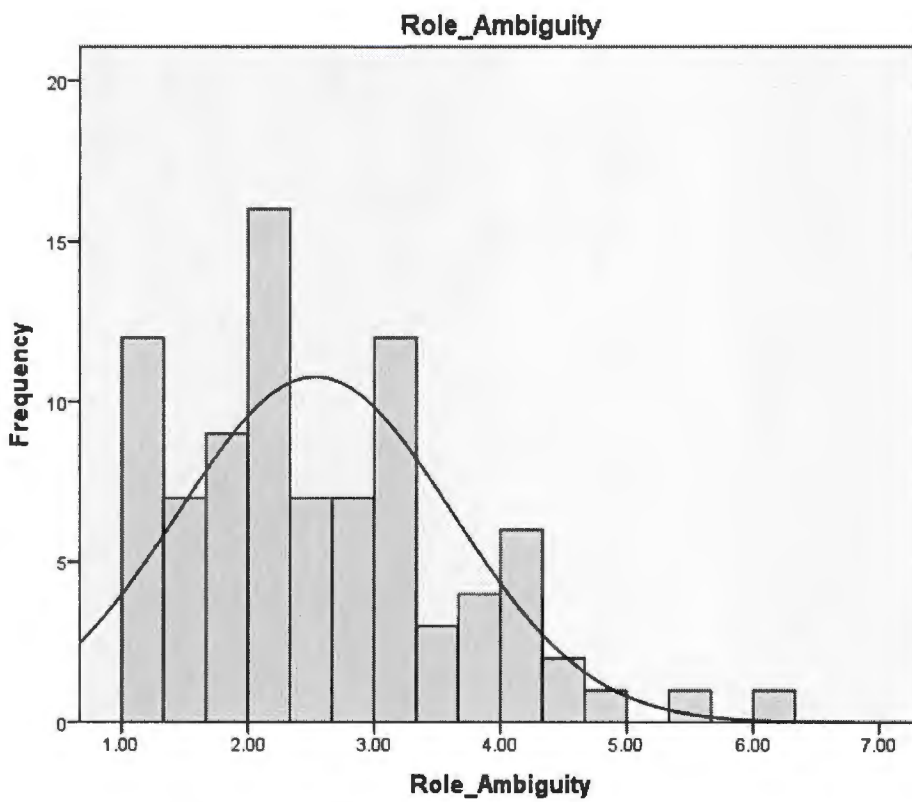
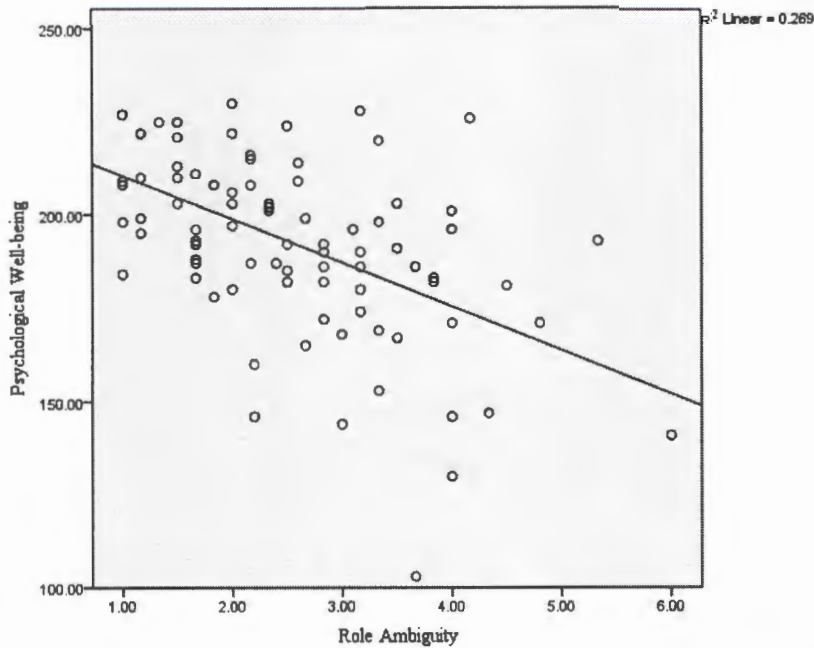


Figure 4.6 Scatter plot of role ambiguity and psychological well-being



The results in Figure 4.3 show a relatively strong relationship owing to the rather steep gradient. The histogram shows that the variable is normally albeit positively skewed which carries the implication that a large proportion of prosecutors may experience role ambiguity which negatively affects their psychological wellbeing hence the negative correlation between role ambiguity and psychological well-being. Based on the results, hypothesis 3 was accepted.

4.4.4 Hypothesis 4:

The next hypothesis tested the relationship between occupational stress (intra-group conflict) and psychological well-being.

Table 4.6

Occupational stress (intra-group conflict) and psychological well-being

Variable	Mean	SD	Df	r	p-value
Intragroup conflict	2.61	0.85	90	-.50	.001

These results indicate a strong correlation. This is an indication that as occupational stress (intra-group conflict) went up, psychological well-being went down. Thus, conflict between prosecutors is a stressor that affected their psychological well-being, ($r = -.50, p < .001$).

Figure 4.7 Histogram of Intragroup Conflict

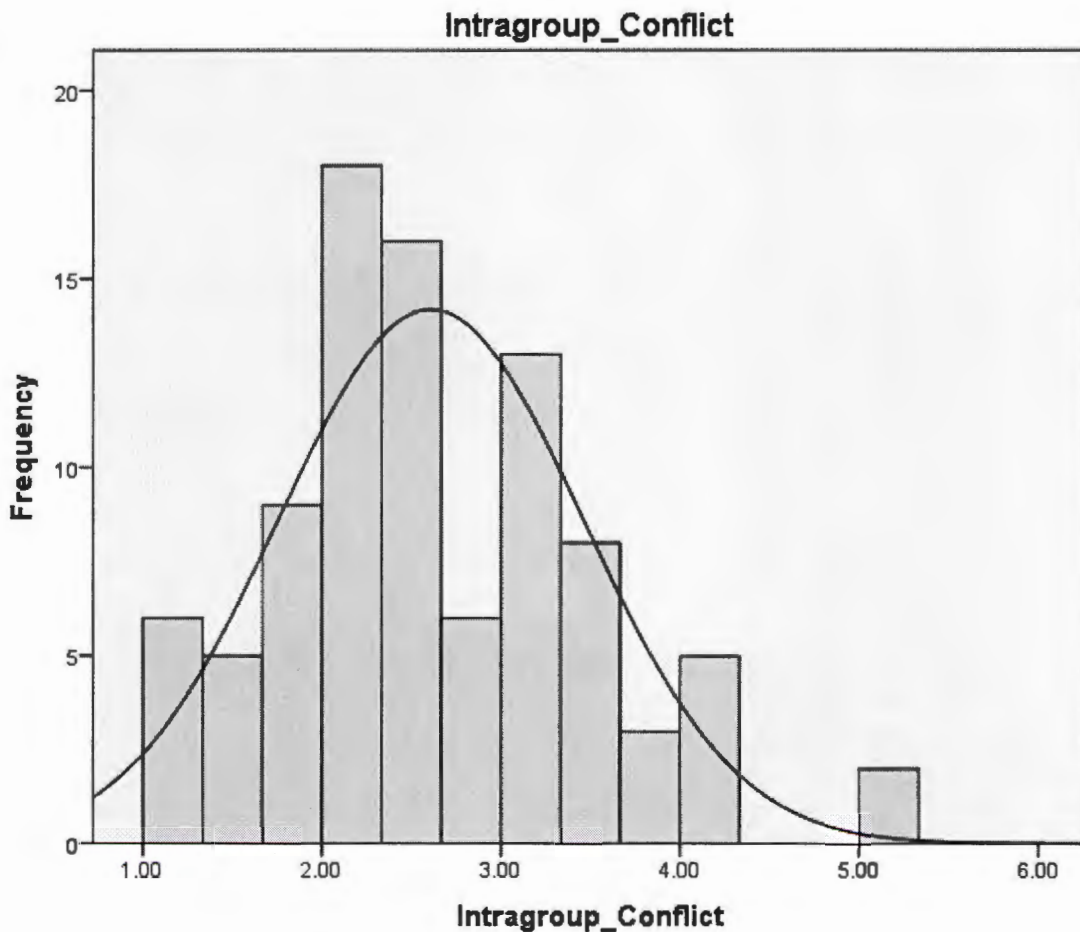
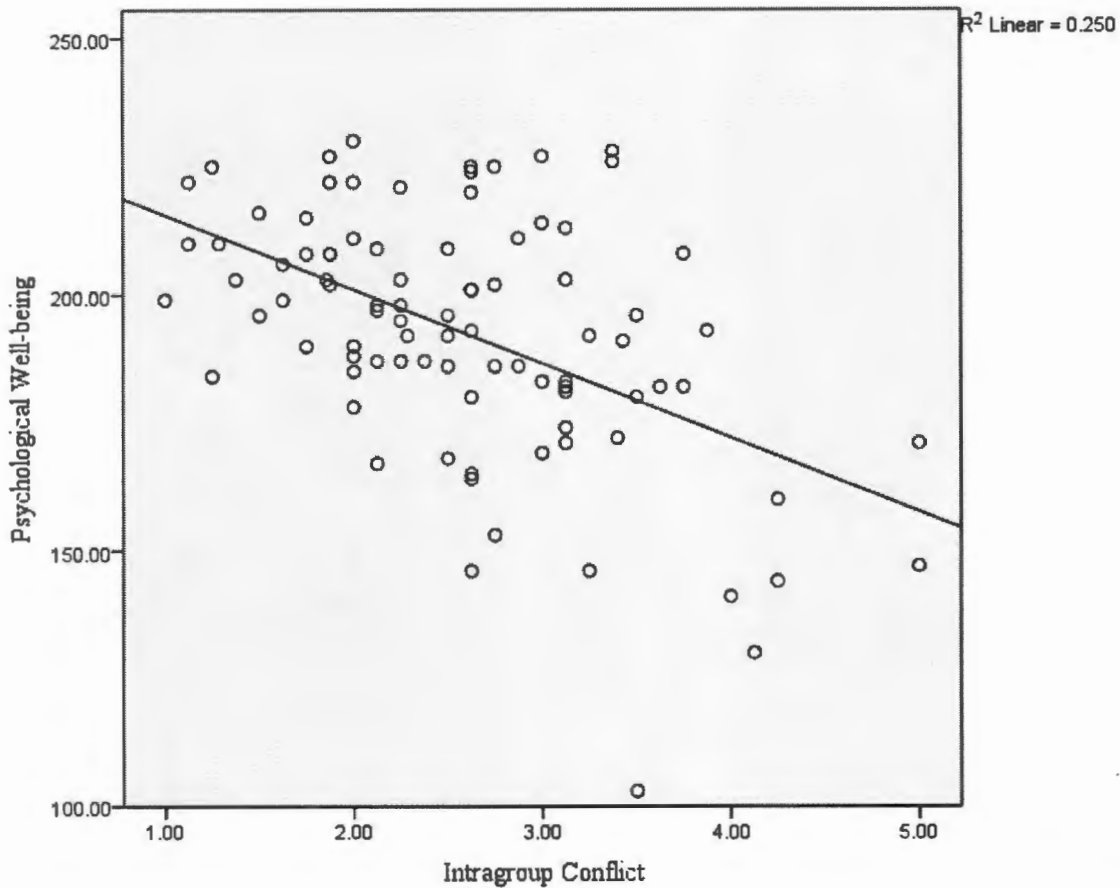


Figure 4.8 Scatter plot of intragroup conflict and psychological well-being



The results in Figure 4.4 show a strong, significant negative correlation between intra-group conflict and psychological well-being. The histogram (figure xyz) show that the variable is normally distributed and positively skewed which implies that a large proportion of prosecutors who scored higher than average on Intra-group conflict experienced poor psychological wellbeing.

Based on the results, hypothesis 4 was accepted.

4.4.5 Hypothesis 5:

The fifth hypothesis tested the relationship between occupational stress (inter-group conflict) and psychological well-being. The following results were obtained:

Table 4.7

Inter-group conflict and psychological well-being

Variable	Mean	SD	df	r	p-value
Inter-group conflict	2.55	0.77	90	-.37	.001

The results show a weak negative relationship between occupational stress (inter-group conflict) and psychological well-being, ($r = -.37, p < .001$). An increase in conflict between other groups negatively affects psychological well-being. This is an indication that conflict with other work groups negatively affects psychological well-being.

Figure 4.9 Histogram of intergroup conflict

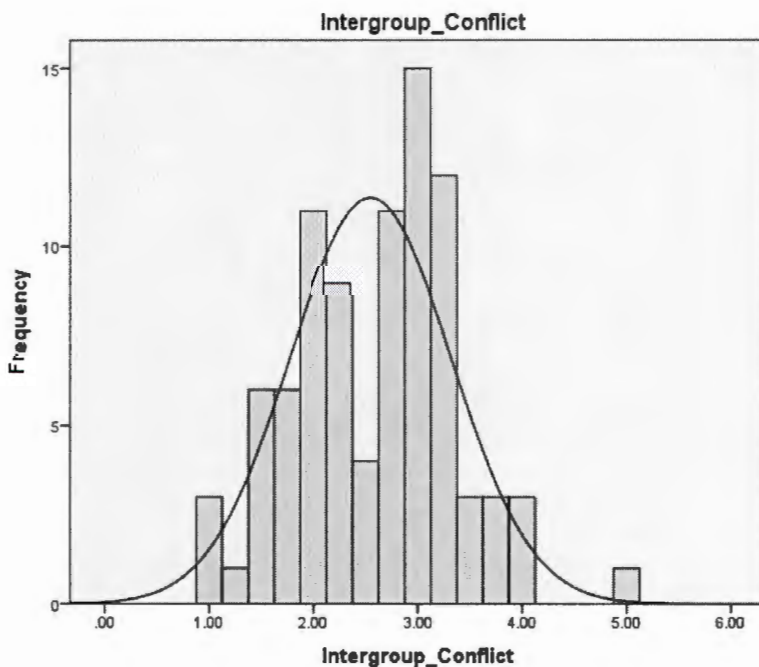
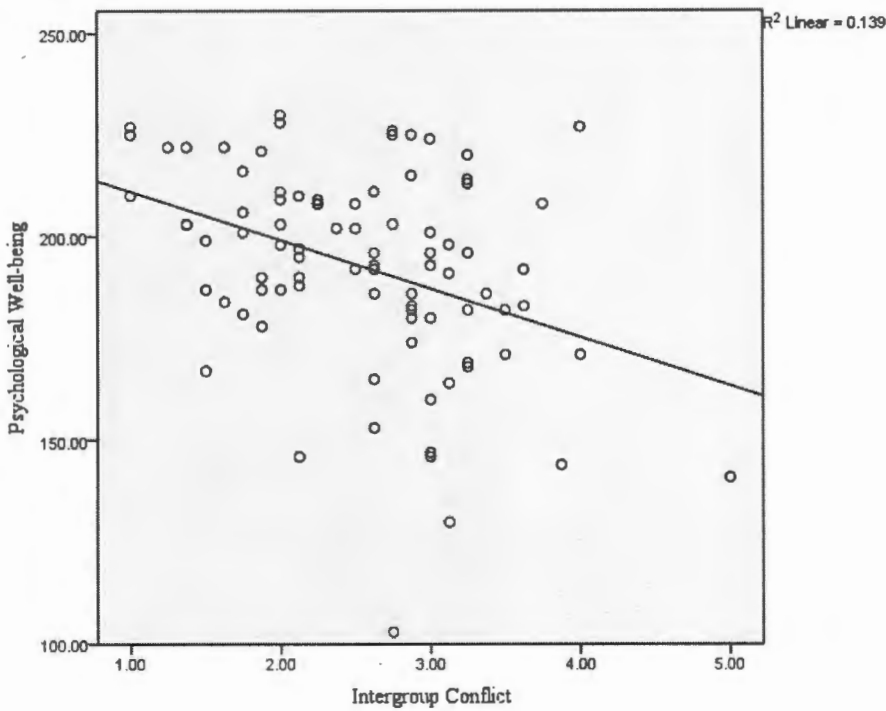


Figure 4.9 shows there is a relatively higher proportion of prosecutors experiencing intergroup conflict which negatively affects their psychological wellbeing as depicted by the relatively steep gradient of the graph in figure 4.10 below, and a correlation as seen in table 4.7 above.

Figure 4.10 Scatter plot of intergroup conflict and psychological well-being



The results in Figure 4.5 show a weak linear but significant negative correlation between intergroup conflict and psychological well-being. Based on the results, hypothesis 5 was accepted.

4.4.6 Hypothesis 6:

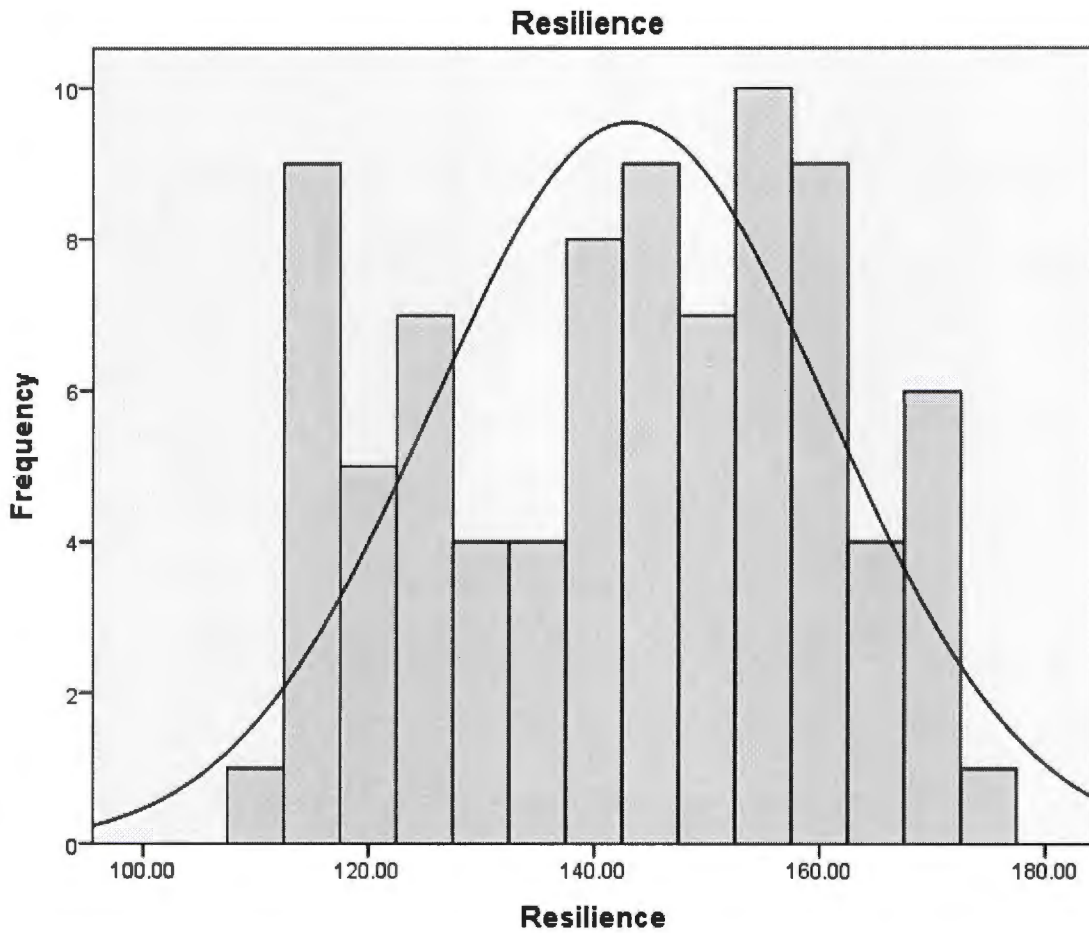
The next hypothesis tested the relationship between resilience and psychological well-being.

Table 4.8: Resilience and psychological well-being

Variable	Mean	SD	df	r	p-value
Resilience	143.17	17.54	90	.451	.001

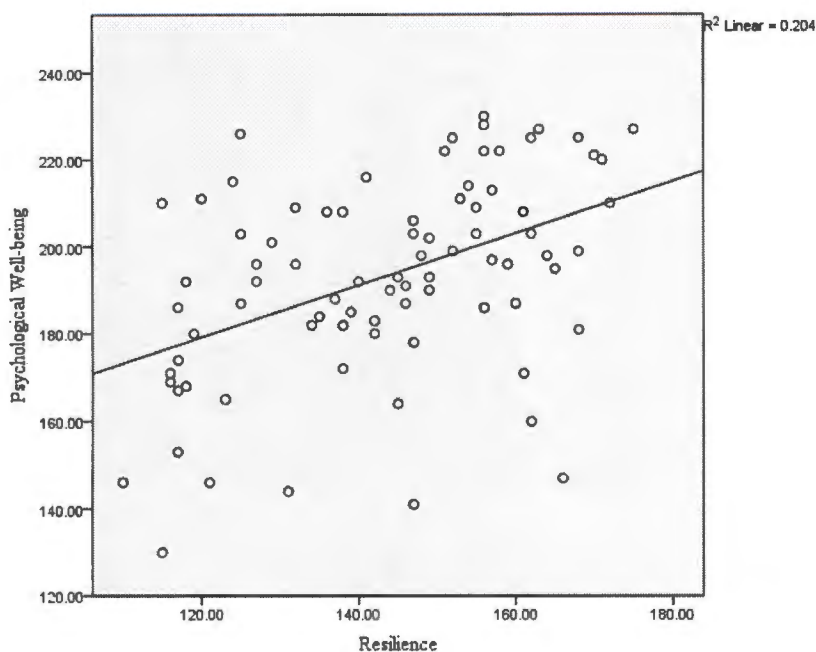
The results revealed a moderate positive relationship between resilience and psychological well-being, ($r=.451, p < .001$). This implies that an increase in resilience leads to a rise in psychological well-being.

Figure 4.11 Histogram of resilience



The figure shows the observations are normally distributed and rather negatively skewed . A large proportion of the respondents show lower than average resilience.

Figure 4.12 Scatter plot of resilience and psychological well-being



The results in Figure 4.6 show a positive correlation between resilience and psychological well-being. The relatively steep and rising gradient communicates a positive relationship between psychological wellbeing and resilience suggesting the higher the resilience the higher the psychological wellbeing. Based on the results, hypothesis 6 was accepted.

4.4.7 Hypothesis 7:

The last hypothesis tested the relationship between occupational stress, resilience and overall psychological well-being. A linear regression was conducted in order to evaluate which of the stressors had an impact on psychological well-being. The hypothesis stated there will be independent and joint contribution of occupational stress and resilience on psychological well-being. The following results were obtained:

Figure 4.13 Scatterplot showing homoscedasticity of predictor variables on the dependent variable

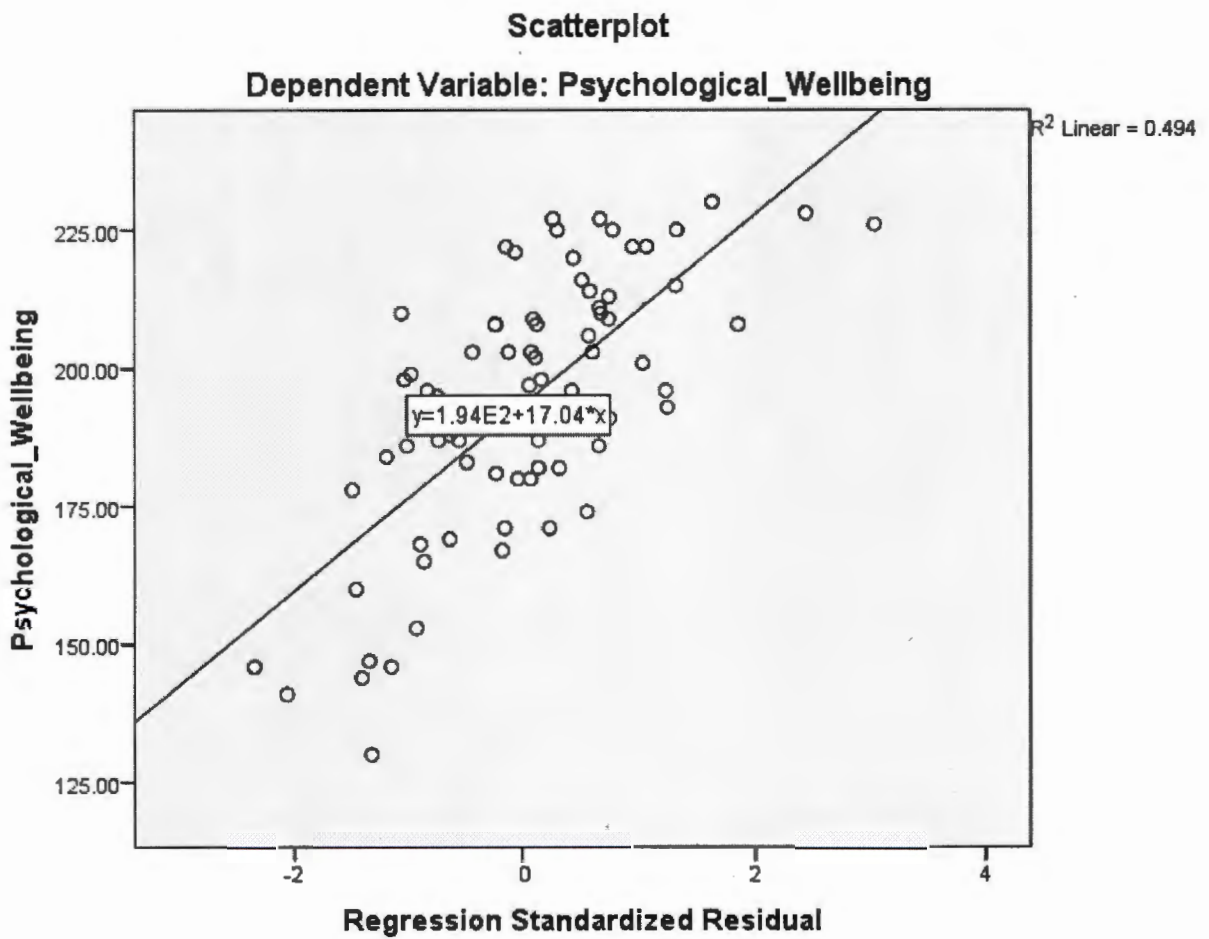


Table 4.9 showing collinearity statistics

Model	Tolerance	VIF
Perceived Employment Opportunities	.833	1.200
Role Conflict	.771	1.298
Role Ambiguity	.543	1.841
Intra-group Conflict	.359	2.784
Inter-group Conflict	.384	2.602
Resilience	.760	1.315

Dependent Variable: Psychological Wellbeing

Table 4.10 Occupational stress, resilience and psychological well-being

Model	Coefficients ^a			F	R	R Square
	β	t	Sig.			
(Constant)	158.372	7.404	.001	12.139	.712 ^a	.506
Perceived Employment Opportunities	-.190	-2.078	.041			
Role conflict	.092	.973	.334			
Role ambiguity	-.169	-1.496	.139			
Intra-group conflict	-.440	-3.163	.002			
Inter-group conflict	.140	1.040	.302			
Resilience	.378	3.958	.001			

a. Dependent variable: Psychological well-being

A linear regression was used to test if occupational stress and resilience significantly contributed to overall psychological wellbeing of prosecutors. The results of the regression indicated three predictors explained 71.2% of the variance ($R^2=71.2$, $F(6,71) = 12.139$, $p < .05$). It was found that perceived employment opportunities significantly predicted psychological wellbeing ($\beta = -.19$, $p < .05$), as did intra-group conflict ($\beta = -.440$, $p < .05$) and resilience ($\beta = .378$, $p < .05$).

4.5 Summary

In this chapter the descriptive statistics and inferential statistics were explained.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a discussion of results of the analysis as reported in chapter 4. The main aim of this study was to explore the relationship between occupational stress and psychological well-being as well as the relationship between resilience and psychological well-being among prosecutors. The first section provides a discussion of the analysis of descriptive statistics.

5.2 Discussion

Majority of the prosecutors were employed on a fulltime permanent and pensionable basis. When looking at the number of years the prosecutors had worked for the DPP, this suggested a young labour force and a high turnover rate in the department. This is an indication that the DPP does not retain skilled human resource that they have trained, this attests to lack of human resource being a problem as reported by Mozola (2017) despite the prospect of job security at the DPP.

The first hypothesis stating that occupational stress (perceived employment opportunities) would have a significant relationship with psychological wellbeing was accepted. Kirves (2014) reported that individuals who perceived that they had low employability had poor wellbeing in general and in the work environment. Indeed Ryff (2013) reports that career pursuits influence wellbeing. This suggests that an inability to find equitable employment outside of the DPP contributed in poor psychological wellbeing of prosecutors.

Hypothesis two was not accepted as no significant relationship was found between occupational stress (role conflict) and psychological wellbeing. The high percentage of graduates with degrees (70.7%) is an indication that DPP has a pool of skilled personnel for the profession, hence role conflict was found not to be a significant factor on psychological well-being, implying

that individuals are clear on their mandate and resourced with the necessities to carry out their duties without a need to violate any protocols in order to get their job done. Na *et al.* (2017), however, found that role conflict had a significant negative impact on the psychological well-being of prosecutors, while Ikonne (2015) found role conflict to significantly and positively impact psychological well-being.

Hypothesis three was confirmed as occupational stress (role ambiguity) significantly and negatively correlated with psychological wellbeing. In a developed country setting, Na *et al.* (2017) found that role ambiguity and a heavy workload negatively affected the psychological wellbeing of prosecutors. Ikonne (2015), however, found a positive significant relationship between role ambiguity, role conflict and psychological well-being among library staff. Professional roles of prosecutors and librarians are distinctly different, with lawyers more likely to be exposed to traumatic material in their work, which could explain the difference in results. The implication of this negative relationship is that there may be aspects of their jobs that leave prosecutors with a feeling of uncertainty or lack of clear direction about the expectations of their individual roles. This could perhaps render them to negatively evaluate themselves when using their own standards and negatively affect their psychological well-being

Intra-group conflict and inter-group conflict were found to be significantly negatively related to psychological well-being, thus hypothesis four and five were accepted. This is an indication that a work environment prone to high conflict, has a deleterious effect on prosecutors' psychological well-being. The results are similar to those of Schmid and Muldoon (2013), who reported that individuals exposed to high levels of inter-group conflict had poor psychological well-being. Intra-group conflict was also found to have a negative relationship with psychological well-being (Medina *et al.* (2005). These results are underscored by (Carsten *et al.*, 2004), who

found conflict and individual health and well-being closely intertwined, hurting health and well-being when not resolved.

Resilience was significantly and positively related to psychological well-being and thus hypothesis 6 was accepted. The results suggest that the more resilience mechanisms they have, the better their psychological well-being. Dias Abreu and Rodriguez Blanco (2017) also found a positive correlation between resilience and well-being. Young (2018) found that resilience predicted psychological well-being, thus improving resilience would improve psychological well-being.

The results obtained from the regression analysis revealed that perceived employment opportunities somewhat had a negative bearing on psychological well-being (the more it was perceived that there were limited positions of equal employment outside DPP, the more their psychological well-being deteriorated). Thus, it was difficult to find similarly equitable employment outside DPP, an indication of the current status quo in Botswana's labour market, which is characterised by a rather high graduate unemployment rate as discussed in Komanyane et al. (2017). The inability to find employment outside DPP negatively affected well-being, an indication that prosecutors experienced some possible unhappiness with their current employment.

Likewise, as in the previous analysis, intra-group conflict was found to significantly and negatively affect psychological well-being as conflict between fellow prosecutors themselves greatly affected their psychological well-being. Furthermore, resilience was also found to significantly affect psychological well-being (as evident in the regression analysis). It had a positive influence on psychological well-being in that the more the individual prosecutor exhibited the characteristics of the resilience variable. Where there was absence of psychopathology or the

presence of competence in the context of significant adversity (Kim-Cohen & Turkewitz, 2012), the better their psychological well-being.

On the other hand, the results revealed that role conflict and role ambiguity variables were insignificant in affecting psychological well-being. This could perhaps be explained by the fact that 70.7% of prosecutors had a Law degree hence, were sufficiently competent to carry out the duties attached to the job. Inter-group conflict also had an insignificant impact on psychological well-being. This is an indication that prosecutors had a higher occupational status than other members of staff in DPP, which could perhaps insulate them from the negative effects of inter-group conflict, as being a prosecutor was a revered position.

As previously, reported, psychological wellbeing was negatively affected by occupational stress in the current study. Previous studies have found occupational stress to negatively affect psychological wellbeing and its domains (Lindfors et al., 2006; Na et al., 2017; Song et al., 2007). The environmental conditions were seen to contribute towards the experience of stress. This is in line with what the NIOSH model posits being that job stressors contribute towards the experience of job stress. This in turn affects the domains of psychological wellbeing as proposed by the theory of psychological wellbeing; domains of wellbeing were impacted by experiencing occupational stress due to elements in the work environment. Resilience was also seen to influence the experience of psychological wellbeing.

5.3 Conclusions

This study sought to explore the relationship between occupational stress, resilience and psychological wellbeing. The study utilised a survey methodology with a correlation and linear regression for the analysis. It revealed relationships between occupational stress, resilience and psychological wellbeing, the most salient being occupational stress (perceived employment

opportunities, role ambiguity, intragroup conflict, intergroup conflict) and resilience which significantly related to psychological wellbeing. The study's findings highlight the importance of engendering positive psychological wellbeing in prosecutors through awareness of factors that influence it.

5.4 Limitations of the study

Self-report measures were used to collect data for this study; this is an indication that prosecutors could have provided desirable responses, thus affecting the results. Lack of consensus in the literature on the makeup of psychological well-being and its measurement is an indication that different variables may be used to study it, thus leading to contradictory or inconclusive support for previous studies. The sample size in the study was small, this affects the generalizability of the results. The amount of time available to carry out the study also impacted on the sample size. Occupational stress was represented by five stressors, which is not an exhaustive list of possible stressors. Further research on other possible stressors is warranted. The measures utilised for this study were developed for a western population and not for the African one. Some concepts can prove elusive to transfer to the African context. The current study explored the relationship between occupational stress and psychological wellbeing. Future studies could examine not only the relationship but the prevalence of occupational stress, resilience and psychological wellbeing in the population. The current study collected data at a single point in time due to the scope of research.

5.5 Recommendations

There is need to improve human resource management among DPP. There is need to provide training on conflict resolution in order for prosecutors to better resolve issues with colleagues. There is need for team building activities within the Department in order to improve relations

among colleagues. There is need for Management to enhance support structures in the work environment that are more accessible to prosecutors to enhance good psychological well-being among prosecutors and engender a positive work environment. In conclusion, after discussing these results with colleagues and experts in the field of human resource management, another recommendation was that prosecutors will benefit from improving their emotional intelligence. The relationship between resilience, psychological wellbeing and emotional quotient could be a topic for further studies.

Future studies could be longitudinal and epidemiological in design to draw a comprehensive picture of the experience of occupational stress, resilience and psychological wellbeing in prosecutors.

References

- Abiola, T., & Udofia, O. (2011). Psychometric assessment of the Wagnild and Young's resilience scale in Kano, Nigeria. *Biomed Central*, 4. doi:10.1186/1756-0500-4-509
- Adegoke, T. G. (2014). Effects of occupational stress on psychological well-being of police employees in Ibadan metropolis, Nigeria *African Research Review*, 8(1), 302-320.
- Aftab, H., & Idrees, W. (2012). A study of job satisfaction and IT's impact on the performance in the banking industry of Pakistan. *International Journal of Business and Social Science*, 3(19).
- Agolla, J. E. (2009). Occupational stress among Police Officers: The case of Botswana Police service. *Research Journal of Business Management*, 2(1), 25-35.
- Ahmady, S., Changiz, T., Masiello, I., & Brommels, M. (2007). Organizational role stress among medical school faculty members in Iran: dealing with role conflict (Publication no. 10.1186/1472-6920-7-14).
- Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International*, 11(1), 11-18.
- Austin, D. (2014). Killing Them Softly: Neuroscience Reveals How Brain Cells Die from Law School Stress and How Neural Self-Hacking Can Optimize Cognitive Performance. In (Vol. 59): University of Denver: Sturm College of Law.
- Baumgardner, S., & Crothers, M. (2010). *Positive Psychology*. Eau Claire: Pearson.
- Bernhard-Oettel, C., De Cuyper, N., Berntson, E., & Isaksson, K. (2008). Well-Being and Organizational Attitudes in Alternative Employment: The Role of Contract and Job Preferences. *International Journal of Stress Management*, 15(4), 345-363.

- Botswana, Parliament. (2015). *Debates- Attorney General Chambers Budget*. Gaborone: Government Publishers.
- Botswana, Parliament. (2017). *Debates*. Gaborone: April 2017.
- Bowleg, L., Huang, J., Brooks, K., Black, A., & Burkholder, G. (2003). Triple Jeopardy and Beyond: Multiple Minority Stress and Resilience Among Black Lesbians. *Journal of Lesbian Studies*, 7(4), 87-108. doi:10.1300/J155v07n04_06
- Briton, J. (2009). *Lawyers, emotional distress and regulation*. Paper presented at the Bar Association Annual Conference March 2009, Queensland.
- Buhare, F., Ai Lin, T., & Wider, W. (2016). The Effect of Occupational Stress on Teachers' Psychological Wellbeing: Social Support as Moderator. *Australian Journal of Basic and Applied Sciences*, 10(4), 54-65.
- Carsten, K. W., van Dierendonck, D., & Dijkstra, M. (2004). Conflict at Work and Individual Wellbeing. *International Journal of Conflict Management*, 15(1), 6.
doi:<https://doi.org/10.1108/eb028976>
- Chamme, M. (2017). *Acting Attorney General Of The Republic Of Botswana On The Occasion Of The Ceremonial Opening Of The 2017 Legal Year*. Gaborone: Attorney General Chambers.
- Coffey, J. K., Wray-Lake, L., Mashek, D., & Branand, B. (2016). A Multi-Study Examination of Well-Being Theory in College and Community Samples. *Journal of Happiness Studies*, 17(1), 187-211. doi:10.1007/s10902-014-9590-8
- Crosby, R. A., Kegler, M. C., & DiClemente, R. J. (2002). Understanding and Applying Theory in Health Promotion Practice and Research. In *Emerging Theories in Health Promotion*

Practice and Research: Strategies for Improving Public Health (pp. 1-16). San Francisco: Jossey-Bass.

Daicoff, S. (1998). Asking Leopards to Change Their Spots: Should Lawyers Change? A Critique of Solutions to Problems with Professionalism by Reference to Empirically-Derived Attorney Personality Attributes. *Georgetown Journal of Legal Ethics*, 11, 547-596.

Daicoff, S. (2011). *Law as a Healing Profession: The "Comprehensive Law Movement"*. New York Law School Clinical Research Institute. Florida Coastal School of Law. New York. Retrieved from <http://ssrn.com/abstract=875449>

Daniels, K., & Harris, C. (2000). Work, psychological well-being and performance. *Occupational Medicine*, 50, 304-309.

Danna, K., & Griffin, W. (1999). Health and Wellbeing in the workplace: a review and synthesis of the literature. *Journal of Management*, 25, 357-384.

De Fatima Antunes Alves Costa, M., & Crstina Ferreira, M. (2014). Sources and Reactions to Stress in Brazilian Lawyers. *Ribeirão Preto*, 24(57). doi:doi.org/10.1590/1982-43272457201407

Dewe, P. J., O'Driscoll, M. P., & Cooper, C. L. (2001). *Organizational stress: A review and critique of theory, research and applications*. London: Sage.

Dewe, P. J., O'Driscoll, M. P., & Cooper, C. L. (2012). Theories of Psychological Stress at Work. In *Handbook of Occupational Health and Wellness* (pp. 23-38). New York: Springer.

Dias Abreu, H., & Rodríguez Blanco, A. J. M. (2017). The Well-Being at Work and Resilience: A Study Correlation in Nursing Technicians in Hospital. *Revista Psicologia, Diversidade e Saúde*, 6(3). doi:10.17267/2317-3394rpds.v6i3.1434

- Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, 2(3), 222-235. doi:10.5502/ijw.v2i3.4
- Donais, B. (2006). *Workplaces That Work: A Guide to Conflict Management in Union and Non-Union Work Environments*
- Everly, G. S., & Lating, J. M. (2013). Anatomy and Physiology of Stress. In *A Clinical Guide to the Treatment of the Human Stress Response*: Springer Science and Business.
- Fako, T. (2010). Occupational stress among university employees in Botswana. *European Journal of Social Sciences*, 15(3), 89-95.
- Fako, T. T., Forchheh, Ntonghanwah*, amp, & Linn, J. G. (2006). Correlates of Work-Place Stress: A Case Study of Botswana Nurses Working in Clinics. *Botswana Notes & Records*, 36(1), 106-124.
- Feder, A., Nestler, E. J., & Charney, D. S. (2009). Psychobiology and molecular genetics of resilience. *Nature reviews. Neuroscience*, 10(6), 446-457. doi:10.1038/nrn2649
- Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *The Royal Society*, 1367-1377.
- Ganster, D., & Rosen, C. (2013). Work Stress and Employee Health: A Multidisciplinary Review. *Journal of Management*, 39(5), 1085. doi:10.1177/0149206313475815
- Gok, A., Akgunduz, Y., & Alkan, C. (2017). The effects of job stress and perceived organizational support on turnover intentions of hotel employees. *Journal of Tourismology*, 3. doi:10.26650/jot.2017.3.2.0003
- Government of Botswana. (2006). *Caring for healht workders-a national strategy for Botswana:needs assessment report, summary and recommentations*. Gaborone: Government Publishers.

- Harrop, E., Addis, S., Elliot, E., & Williams, G. (2009). *Resilience, coping and salutogenic approaches to maintaining and generating health: A review*. Retrieved from Cardiff:
- Huerta-Franco, M.-R., Vargas-Luna, M., Tienda, P., Delgadillo-Holtfort, I., Balleza-Ordaz, M., & Flores-Hernandez, C. (2013). Effects of occupational stress on the gastrointestinal tract. *World Journal of Gastrointestinal Pathophysiology*, 4(4), 108-118.
doi:10.4291/wjgp.v4.i4.108
- Hupert, F. (2009). Psychological Well-being: Evidence Regarding its Causes and Consequences. *Applied psychology: Health and wellbeing*, 1(2), 137-167.
- Hurrell, J., & McLaney, M. (1988). Exposure to job stress- a new psychometric instrument. *Scandinavian Journal of work environment health*, 27-28.
- Ikonne, C. (2015). Job Stress and Psychological Well-Being among library staff in Nigeria. *Open Access Library Journal*, 2, 1-12. doi:10.4236/oalib.1101632
- Inoue, A., Kawakami, N., Ishizaki, M., Shimazu, A., Tsuchiya, M., Tabata, M., . . . Kuroda, M. (2010). Organizational justice, psychological distress, and work engagement in Japanese workers. *Int Arch Occup Environ Health*, 83(1), 29-38. doi:10.1007/s00420-009-0485-7
- International Labour Organisation. (2011a). Theories of Job Stress. In *Psychosocial and Organizational Factors*.
- International Labour Organisation. (2016). *Workplace Stress: A collective challenge*. Retrieved from
- Johnson, D., Polusny, M. A., Erbes, C. R., King, D., King, L., Litz, B. T., . . . Southwick, S. M. (2011). Resilience and response to stress: Development and initial validation of the Response to Stressful Experiences Scale (RSES). *Journal of Affective Disorders*, 176(2), 161-169.

- Jovanovic, J., Lazaridis, K., & Stefanovic, V. (2006). Theoretical Approaches to Problem of Occupational Stress. *ACTA FAC MED NAISS*, 23(3), 163-169.
- Kansky, J., & Diener, E. (2017). Benefits of Well-Being: Health, Social Relationships, Work, and Resilience. *Journal of Positive Psychology and Wellbeing*, 1(2).
- Keyes, C. L. M. (2013). Promoting and Protecting Positive Mental Health: Early and Often Throughout the Lifespan. In C. L. M. Keyes (Ed.), *Mental Well-Being: International Contributions to the Study of Positive Mental Health* (pp. 3-28). Dordrecht: Springer Netherlands.
- Khan, R. (2010). *Effective Legal And Practical Measures For Combating Corruption*. Paper presented at the The 13th International Training Course On The Criminal Justice Response To Corruption Participants' Papers.
- Kim-Cohen, J., & Turkewitz, R. (2012). Resilience and measured gene–environment interactions. *Development and Psychopathology*, 24(4), 1297-1306.
doi:10.1017/S0954579412000715
- Kirves, K. (2014). *Perceived Employability: Antecedents, trajectories and well-being consequences*. (Doctor of Psychology (PhD), University of Tampere, Helsinki.
- Komanyane, C. T., Siphambe, H. K., & Oageng, I. P. (2017). Earnings Differentials Between Citizens And Non-Citizens In The Formal Sector Of Botswana's Labour Market. *Journal of Social and Economic Policy*, 14(2), 75-90.
- Kopp, M. S. (2007). Cultural Transition. In *Encyclopedia of Stress* (pp. 678-682). San Diego: Elsevier.
- Kortum, E. (2014). The WHO Healthy Workplace Model. In *Contemporary Occupational Health Psychology* (pp. 149-164): John Wiley & Sons, Ltd.

- Kortum, E., & Leka, S. (2014). Tackling psychosocial risks and work-related stress in developing countries: The need for a multilevel intervention framework. *International Journal of Stress Management*, 21(1), 7-26. doi:10.1037/a0035033
- Kumpfer, K. L. (1999). Factors and Processes Contributing to Resilience: The Resilience Framework. In M. Glantz & J. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations* (pp. 179-224). New York: Kluwer Academic/Plenum Publishers.
- Lazarus, R. (1993). From Psychological stress to the emotions: a history of changing outlooks. *Annua Reviews Inc*, 1-21.
- Lazarus, R., & Folkman, S. (1984). *Stress, Appraisal and Coping*. New York: Springer.
- Leka, S., Griffiths, A., & Cox, T. (2003). *Work Organization and Stress*. Retrieved from
- Levine, S. (2003). Psychological and social aspects of resilience: a synthesis of risks and resources. *Dialogues in clinical neuroscience*, 5(3), 273-280.
- Lindfors, P., Berntsson, L., & Lundberg, U. (2006). Total Workload as Related to Psychological Well-Being and Symptoms in Full-Time Employed Female and Male White-Collar Workers. *International Journal of Behavioral Medicine*, 13(2), 131-137.
- Lundberg, U., & Cooper, C. L. (2010). *The Science of Occupational Health: Stress, Psychobiology, and the New World of Work*: Wiley-Blackwell.
- Manshor, A., Fontaine, R., & Chong, S. (2003). Occupational stress among managers: A Malaysian survey. *Journal of Managerial Psychology*, 18, 622-628.
doi:10.1108/02683940310494412
- Maphangela, T. (2015). *Factors associated with occupational stress among nurses working in clinics in Gaborone, Botswana*.

- Marcus, C. (2014). Lawyers' alarming depression rates prompt efforts to boost mental health support. *ABC News*.
- Maree, K., & Pietersen, J. (2010). Surveys and the use of questionnaires. In K. Maree (Ed.), *First Steps in Research*. Pretoria: Van Schaik.
- Masten, A. S., & Barnes, A. J. (2018). Resilience in Children: Developmental Perspectives. *Children (Basel, Switzerland)*, 5(7), 98. doi:10.3390/children5070098
- McDonald, S. (2014) Building individual resilience to improve workplace wellbeing and work outcomes. In, *Psychology at Work: Vol. 36. InPsych*. Australia.
- Medina, F., Munduate, L., Dorado, M., Martínez-Corts, I., & Guerra, J. (2005). *Types of intragroup conflict and affective reactions* (Vol. 20).
- Meier, L. L., Semmer, N. K., & Gross, S. (2014). The effect of conflict at work on well-being: Depressive symptoms as a vulnerability factor. *Work & Stress*, 28(1), 31-48. doi:10.1080/02678373.2013.876691
- Mohajan, H. (2012). The occupational stress and risk of it among the employees. *International Journal of Mainstream Social Science*, 2(2), 17-34.
- Mohd Yunus, J. b., & Mahajar, A. J. b. (2011). Stress and Psychological Well-Being of Government Officers in Malaysia. *The Journal of Human Resource and Adult Learning*, 7(2), 40-50.
- Mozola, L. (2017). Lack of resources cripple judicial system- Dibotelo. *Mmegi*. Retrieved from <http://www.mmegi.bw/index.php?aid=70648&dir=2017/august/01>
- Muijs, D. (2010). Doing Quantitative Research in Education with SPSS. In E. Babbie (Ed.), *The Practice of Social Research* (Vol. 2). London: SAGE Publications.

- Mukaka, M. M. (2012). Statistics corner: A guide to appropriate use of correlation coefficient in medical research. *Malawi medical journal : the journal of Medical Association of Malawi*, 24(3), 69-71.
- Na, C., Choo, T., & Klingfuss, J. A. (2017). The Causes and Consequences of Job-Related Stress among Prosecutors. *American Journal of Criminal Justice*. doi:10.1007/s12103-017-9396-4
- Nedim, U. (Producer). (2015, 3 March 2017). Lawyers and Vicarious Trauma in the Legal System. *Sydney Criminal Lawyers*.
- Nixon, A., Mazzola, J., Bauer, J., Kreuger, J., & Spector, P. (2011). Can work make you sick? A meta-analysis of the relationships between job stressors and physical symptoms. *An International Journal of Work, Health and Organisations*, 25(1), 1-22. doi:0.1080/02678373.2011.569175
- Pahlevani, M., Radmehr, S., Amini, F., Bahraminasab, M., & Yadzani, M. (2015). Effectiveness of stress management training on the psychological well-being of the nurses. *Journal of Medicine and Life*, 8(4), 313-318.
- Parker, C. (2014). The 'Moral Panic' over Psychological Wellbeing in the legal profession: A personal or political ethical response. *UNSW Law Journal*, 37(3), 1103-1141.
- Peter, R., & Siegrist, J. (1999). Chronic psychosocial stress at work and cardiovascular disease: The role of effort-reward imbalance. *International Journal of Law and Psychiatry*, 22(5), 441-449.
- Plattner, I., & Mberengwa, D. (2010). 'We are the forgotten ones': Occupational stress among university secretaries in Botswana. *SA Journal of Human Resource Management*, 8(1).
- Rahim, A. (2010). *Managing conflict in organizations* (Vol. 4). New York: Routledge.

- Rahim, N. B., & Siti-Rohaida, M. Z. (2015). Career Satisfaction and Psychological wellbeing among professional engineers in Malaysia: The effect of career goal development. *Asian Academy of Management Journal*, 20(2), 127-146.
- Rees, C. S., Breen, L. J., Cusack, L., & Hegney, D. (2015). Understanding individual resilience in the workplace: the international collaboration of workforce resilience model. *Frontiers in Psychology*, 6, 73-73. doi:10.3389/fpsyg.2015.00073
- Reporter, I. (Producer). (2016). Work Stress costs SA R40bn. *Business Report*. Retrieved from <https://www.iol.co.za/business-report/economy>
- Rice, V. H. (2011). Theories of Stress and its Relationship to Health. In *Handbook of Stress, Coping and Health* (pp. 22-41). Detroit: Sage.
- Richardson, G. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58, 307-321.
- Robertson, I., & Cooper, R. (2010). Psychological well-being at work: Research evidence and current issues. In: Leeds University Business School.
- Rothmann, S., & Jackson, T. B. (2005). Work-Related Well-Being of Educators in a District of the North-West Province. *Perspectives in Education*, 23(3), 16.
- Rovai, A., Baker, J., & Ponton, M. (2014). *Social Science Research Design and Statistics: A practitioners guide to Research Methods and IBM SPSS Analysis* (Vol. 2). Chesapeake: Watertree Press.
- Ryff, C. (1995). Psychological Well-Being in Adult Life. *Current Directions in Psychological Science*, 4(4), 99-104. doi:10.1111/1467-8721.ep10772395
- Ryff, C., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.

- Ryff, C. D., & Singer, B. (1996). Psychological Well-Being: Meaning, Measurement, and Implications for Psychotherapy Research. *Psychotherapy and Psychosomatics*, 65(1), 14-23. doi:10.1159/000289026
- Sadock, V. A., & Sadock, B. J. (2007). *Kaplan and Sadocks' Synopsis of Psychiatry*. Philadelphia: Lippincott Williams and Wilkins.
- Sagone, E., & Caroli, M. E. D. (2014). Relationships between Psychological Well-being and Resilience in Middle and Late Adolescents. *Procedia - Social and Behavioral Sciences*, 141, 881-887. doi:<http://dx.doi.org/10.1016/j.sbspro.2014.05.154>
- Schmid, K., & Muldoon, O. (2013). Perceived threat, social identification, and psychological well-being: The effects of political conflict exposure (Publication no. 10.1111/pops.12073). from Wiley Periodicals
- Seifert, K. L., Hoffnung, R. J., & Hoffnung, M. (2000). *Lifespan Development*. Boston: Houghton Mifflin Company.
- Seligman, M. E. P. (2011). *Flourish: A Visionary New Understanding of Happiness and Well-being*. New York: Free Press.
- Senova, A., & Antosova, M. (2014). Work stress as a worldwide problem in present time. *Social and Behavioural Sciences*, 109, 312-316. doi:10.1016/j.sbspro.2013.12.463
- Siegrist, J. (1996). Adverse health effects of high effort-low reward conditions at work. *Journal of Occupational Health Psychology*(1), 27-43.
- Song, J., Marks, N. F., & Han, G. (2007). Work, family, work-family spillover and mental health among working adults - A comparison of data from national surveys in Korea and the U. S National surveys. *Family and Culture*, 19(2), 61-92.

- Souri, H., & Hasanirad, T. (2011). Relationship between Resilience, Optimism and Psychological Well-Being in Students of Medicine. *Procedia - Social and Behavioral Sciences*, 30, 1541-1544. doi:10.1016/j.sbspro.2011.10.299
- Tansey, T., Bezyak, J., Kaya, C., Ditchman, N., & Catalano, D. (2017). Resilience and Quality of Life: An Investigation of Kumpfer's Resilience Model With Persons With Spinal Cord Injuries. *Rehabilitation Counseling Bulletin*, 60(3), 163-174.
- Trochim, W. M. K. (Producer). (2006). Inferential Statistics. *Research Methods Knowledge Base*. Retrieved from <http://www.socialresearchmethods.net/>
- Tsai, F.-J., Huang, W.-L., & Chan, C.-C. (2009). Occupational Stress and Burnout of Lawyers. *Journal of Occupational Health*, 51, 443-445.
- Tsuno, K., Kawakami, N., Inoue, A., Ishizaki, M., Tabata, M., Tsuchiya, M., . . . Shimazu, A. (2009). Intragroup and intergroup conflict at work, psychological distress, and work engagement in a sample of employees in Japan. *Ind Health*, 47(6), 640-648.
- Ungar, M. (2011). The Social Ecology of Resilience: Addressing Contextual and Cultural Ambiguity of a Nascent Construct. *American Journal of Orthopsychiatry*, 81(1), 1-17.
- van der Colff, J., & Rothmann, S. (2014). Occupational stress of professional nurses in South Africa. *Journal of Psychology in Africa*, 24(4), 375-384.
doi:10.1080/14330237.2014.980626
- Wagnild, G. (2009). A Review of the Resilience Scale. *Journal of Nursing Measurement*, 17(2), 105-124. doi:DOI: 10.1891/1061-3749.17.2.105
- Wagnild, G. (2013). Development and Use of the Resilience Scale (RS) with Middle-Aged and Older Adults. In S. Prince-Ernbury & D. H. Saklofske (Eds.), *Resilience in Children*,

Adolescents, and Adults: Translating Research into Practice (pp. 151-160). New York, NY: Springer New York.

Wagnild, G. M., & Young, H. M. (1993). Development and Psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurements, 1*, 165-178.

Warr, P. (2012). How to Think About and Measure Psychological Well-being. In.

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health Qual Life Outcomes, 9*, 8. doi:10.1186/1477-7525-9-8

Winefield, H., Gill, T., Taylor, A., & Pilkington, R. (2012). Psychological Well-being and psychological distress: is it necessary to measure both? (Publication no. doi:10.1186/2211-1522-2-3).

Wissing, M. P., & van Eeden, C. (2002). Empirical clarification of the nature of psychological well-being. *South African Journal of Psychology, 32*(1), 32-44.

Wood, S. K., & Bhatnagar, S. (2015). Resilience to the effects of social stress: Evidence from clinical and preclinical studies on the role of coping strategies. *Neurobiology of Stress, 1*, 164-173. doi:<https://doi.org/10.1016/j.ynstr.2014.11.002>

Wright, T., & Cropanzano, R. (2004). The Role of Psychological Well-Being in Job Performance: A Fresh Look at an Age-Old Quest. *Organizational Dynamics, 33*(4), 338-351.

Wu, G., Feder, A., Cohen, H., Kim, J., Calderon, S., Charney, D., & Mathe, A. (2013). Understanding Resilience. *Frontiers in Behavioural Neuroscience, 7*(10), 1-15. doi:10.3389/fnbeh.2013.00010

- Young, K. (2018). A study on Emotional labor, resilience and psychological wellbeing of clinical nurses. *Journal of the Korea Academia-Industrial Cooperation Society*, 19(2), 339-346.
- Zannas, A. S., & West, A. E. (2014). Epigenetics and the regulation of stress vulnerability and resilience. *Neuroscience*, 264, 157-170. doi:10.1016/j.neuroscience.2013.12.003

Data collection tool

The relationship between occupational stress, resilience and psychological well-being among prosecutors in Botswana

My name is Lesedi Moamogwe. I am a graduate student at the North-West University, Mafikeng Campus, working with Dr Petro Erasmus and Mrs Gloria Pila-Nemutandani in the Department of Psychology.

I would like to invite you to take part in my research study, which asks about your experiences in relation to your work. Your responses will be combined with those of others to help inform the study about your experience of the work environment.

I request you to voluntarily complete this questionnaire. It involves questions about your work environment and your well-being and should take about 15 minutes to complete. Your completion of this questionnaire demonstrates your full consent to participation. Participation in the research is completely voluntary and you can withdraw your consent at any point in time should you wish to do so.

The survey is anonymous and, as a result, will not be collecting information that will easily identify you, like your name or any other unique identifiers. When the research is completed, the researcher will destroy the data.

There is no direct benefit to you for taking part in this study. It is hoped that the research will, however, help to improve future support. The study will also increase the pool of knowledge available on the work environment and the well-being of individuals in Botswana.

Some of the survey questions may make you uncomfortable. You are free to stop participating at any time. You could also contact my supervisors or me if you require additional support or information.

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Background information

Please answer the following questions:

1. Please indicate your sex. [Please tick the appropriate box]

1 = Female

2 = Male

2. How old were you on your last birthday? (in years) _____

3. What is your marital status? Please circle the applicable option

1 = Married 2 = Single

4. Do you have children living at home? Please tick

1 = Yes

2 = No

5. What is your level of education?

6. For how long have you been employed in your current job? _____

7. Select the most appropriate description of your job situation:

(1) Full-time permanent employee

(2) Full-time temporary employee

(3) Part-time permanent employee

(4) Other _____

APPENDIX A

RYFF'S PSYCHOLOGICAL WELL-BEING SCALE (PWB)

Please indicate your degree of agreement by ticking the number that best reflects your feeling (using a score ranging from 1-6 with **1 indicating strong disagreement** and **6 indicating strong agreement**) to the following statements:

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Agree	Strongly Agree
1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people						
2. In general, I feel I am in charge of the situation in which I live.						
3. I am not interested in activities that will expand my horizons.						
4. Most people see me as loving and affectionate.						
5. I live life one day at a time and don't really think about the future.						
6. When I look at the story of my life, I am pleased with how things have turned out.						
7. My decisions are not usually influenced by what everyone else is doing.						
8. The demands of everyday life often get me down.						
9. I think it is important to have new experiences that challenge how you think about yourself and the world.						
10. Maintaining close relationships has been difficult and frustrating for me.						
11. I have a sense of direction and purpose in life.						
12. In general, I feel confident and positive about myself.						
13. I tend to worry about what other people think of me						
14. I do not fit very well with the people and the community around me.						
15. When I think about it, I haven't really improved much as a person over the years.						
16. I often feel lonely because I have few close friends with whom to share my concerns.						
17. My daily activities often seem trivial and unimportant to me						
18. I feel like many of the people I know have gotten more out of life than I have.						

19.	I tend to be influenced by people with strong opinions.						
20.	I am quite good at managing the many responsibilities of my daily life.						
21.	I have the sense that I have developed a lot as a person over time.						
22.	I enjoy personal and mutual conversations with family members						
23.	I don't have a good sense of what it is I'm trying to accomplish in life.						
24.	I like most aspects of my personality.						
25.	I have confidence in my opinions, even if they are contrary to the general consensus.						
26.	I often feel overwhelmed by my responsibilities.						
27.	I do not enjoy being in new situations that require me to change my old familiar ways of doing things.						
28.	People would describe me as a giving person, willing to share my time with others.						
29.	I enjoy making plans for the future and working to make them a reality.						
30.	In many ways, I feel disappointed about my achievements in life.						
31.	It's difficult for me to voice my own opinions on controversial matters.						
32.	I have difficulty arranging my life in a way that is satisfying to me.						
33.	For me, life has been a continuous process of learning, changing, and growth.						
34.	I have not experienced many warm and trusting relationships with others.						
35.	Some people wander aimlessly through life, but I am not one of them.						
36.	My attitude about myself is probably not as positive as most people feel about themselves.						
37.	I judge myself by what I think is important, not by the values of what others think is important.						
38.	I have been able to build a home and a lifestyle for myself that is much to my liking.						
39.	I gave up trying to make big improvements or changes in my life a long time ago.						
40.	I know that I can trust my friends, and they know they can trust me.						
41.	I sometimes feel as if I've done all there is to do in life.						
42.	When I compare myself to friends and acquaintances, it makes me feel good about who I am.						

APPENDIX B

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH GENERIC

JOB STRESS SCALE

We want to know about your work environment and how it affects you. This information is not available anywhere else. Your responses to the following questions are needed.

Conflict at work

Please answer the following questions about your work situation. Please tick the number indicating the extent to which you **agree** or **disagree** with the statement.

	Strongly Disagree	Moderately Disagree	Neither Agree nor Disagree	Moderately Agree	Strong Agree
1. There is harmony within my group.					
2. In our group, we have lots of bickering (arguing) over who should do what job.					
3. There is difference of opinion among the members of my group.					
4. There is dissension in my group.					
5. The members of my group are supportive of each other's ideas.					
6. There are clashes between subgroups within my group.					
7. There is friendliness among the members of my group.					
8. There is "we" feeling among members of my group.					
9. There are disputes between my group and other groups.					
10. There is agreement between my group and other groups.					
11. Other groups withhold information necessary for the attainment of our group tasks.					
12. The relationship between my group and other groups is harmonious in attaining the overall organizational goals.					
13. There is lack of mutual assistance between my group and other groups.					
14. There is cooperation between my group and other groups.					
15. There are personality clashes between my group and other groups.					
16. Other groups create problems for my group.					

Employment opportunities

The next four questions request you to evaluate your feelings about your job in relation to other jobs you might be able to get. Please respond to each item by ticking the number of the response that best indicates your feelings about the question.

1. Very easy 2. Quite easy 3. Fairly easy 4. Not quite so easy 5. Not at all easy

	Very Easy	Quite Easy	Fairly Easy	Not Quite so Easy	Not At All Easy
1. How easy would it be for you to find a suitable job with another employer?					
2. How easy would it be for you to find a job as good as <i>the one you now have</i> with another employer?					
3. How would you describe the <i>number of available jobs</i> , with all types of employers, for a person with your qualifications?					
4. How likely is it that you would have to move out of your local area to find a suitable job with another employer?					

Your job

How accurate are each of the following statements in describing your job? Please tick

	1. Very Inaccurate	2. Mostly Inaccurate	3. Slightly Inaccurate	4. Uncertain	5. Slightly Accurate	6. Mostly Accurate	7. Very Accurate
1. I feel certain about how much authority I have.							
2. There are clear, planned goals and objectives for my job.							
3. I have to do things that should be done differently.							
4. I know that I have divided my time properly.							
5. I receive an assignment without the help I need to complete it.							
6. I know what my responsibilities are.							
7. I have to bend or break a rule or policy in order to carry out an assignment.							
8. I work with two or more groups who operate quite differently.							
9. I know exactly what is expected of me.							
10. I receive incompatible requests from two or more people.							
11. I do things that are apt to be accepted by one person and not accepted by others.							
12. I receive an assignment without adequate resources and materials to execute it.							
13. Explanation is clear about what has to be done on my job.							
14. I work on unnecessary things							

APPENDIX C

THE RESILIENCE SCALE

Please read the following statements. Please respond to each item by ticking the number of the response that best indicates your feelings about the question. For example, if you strongly disagree with a statement, tick "1. **Strongly Disagree**". If you are neutral, circle "4. **Neutral**", and if you strongly agree, circle "7. **Strongly Agree**", etc.

	Strongly Disagree	Mostly Inaccurate	Slightly Inaccurate	Neutral	Slightly Accurate	Mostly Accurate	Strongly Agree
1. When I make plans, I follow through with them.							
2. I usually manage one way or another.							
3. I am able to depend on myself more than anyone else.							
4. Keeping interested in things is important to me.							
5. I can be on my own if I have to.							
6. I feel proud that I have accomplished things in life.							
7. I usually take things in stride.							
8. I am friends with myself							
9. I feel that I can handle many things at a time.							
10. I am determined							
11. I seldom wonder what the point of it all is.							
12. I take things one day at a time							
13. I can get through difficult times because I've experienced difficulty before.							
14. I have self-discipline.							
15. I keep interested in things.							
16. I can usually find something to laugh about.							
17. My belief in myself gets me through hard times.							
18. In an emergency, I'm someone people can generally rely on.							
19. I can usually look at a situation in a number of ways.							

20. Sometimes I make myself do things whether I want to or not.							
21. My life has meaning.							
22. I do not dwell on things that I can't do anything about.							
23. When I'm in a difficult situation, I can usually find my way out of it.							
24. I have enough energy to do what I have to do.							
25. It's okay if there are people who don't like me.							

APPENDIX D NIOSH SUBSCALES USED

Form number	Form name	Factors	Factor definition	Alpha
/02	Background information			
/01	Conflict at work	Intra-group conflict	1,2,3,4,5,6,7,8,(r. s. 1,5,7,8,)	0.85
		Inter-group conflict	9,10,11,12,13,14,15,16(r.s.10,12,14)	0.86
/01	Employment opportunities	Perceived employment opportunities	1,2,3	0.80
/01	Your job	Role conflict	3,5,7,8,10,11,12,14	0.82
		Role ambiguity	1,2,4,6,9,13(r.s all items)	0.82

APPENDIX E – Ethical Clearance



NORTH-WEST UNIVERSITY
YUNIBESITH YA BOKONE-BOFHIRIMA
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Private Bag X6001, Potchefstroom
South Africa 2520

Tel: (018) 299-4900
Faks: (018) 299-4910
Web: <http://www.nwu.ac.za>

Ethics Committee
Tel: +27 18 299 4949
Email: Ethics@nwu.ac.za

ETHICS APPROVAL OF PROJECT

The North-West University Research Ethics Regulatory Committee (NWU-RERC) hereby approves your project as indicated below. This implies that the NWU-RERC grants its permission that provided the special conditions specified below are met and pending any other authorisation that may be necessary, the project may be initiated, using the ethics number below.

Project title: The relationship between occupational stress, resilience and psychological well-being among lawyers in Botswana	
Project Leader:	Dr P Erasmus & Me M Mokoena
Student:	L. Moamogae
Ethics number:	N W U - 0 0 4 0 5 - 1 4 - A 9
Approval date:	2014-11-17
Expiry date:	2019-11-18

Special conditions of the approval (if any): None

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following:

- The project leader (principle investigator) must report in the prescribed format to the NWU-RERC:
 - annually (or as otherwise requested) on the progress of the project,
 - without any delay in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
- The approval applies strictly to the protocol as stipulated in the application form. Should any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the NWU-RERC. Would there be deviations from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date, a new application must be made to the NWU-RERC and new approval received before or on the expiry date.
- In the interest of ethical responsibility the NWU-RERC retains the right to:
 - request access to any information or data at any time during the course or after completion of the project;
 - withdraw or postpone approval if:
 - any unethical principles or practices of the project are revealed or suspected,
 - it becomes apparent that any relevant information was withheld from the NWU-RERC or that information has been false or misrepresented,
 - the required annual report and reporting of adverse events was not done timely and accurately,
 - new institutional rules, national legislation or international conventions deem it necessary.

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

Yours sincerely

Linda du Plessis

Digitally signed by Linda du Plessis
DN: cn=Linda du Plessis, o=NWU,
ou=West-Transvaal Campus, email=
lindadup@nwu.ac.za,
c=ZA

Prof Linda du Plessis

Chair NWU Research Ethics Regulatory Committee (RERC)

APPENDIX F-Permission To Conduct Research

TELEPHONE: 2442321
FACSIMILE: 292263
TELEGRAMS: LBSAL
REFERENCE: DPP/DP/11/60



REPUBLIC OF BOTSWANA

Directorate of Public Prosecutions
Private Bag 90356
Gaborone
BOTSWANA

29th May 2015

TO: Lesedi Punit Moamogwe
P.O. Box 63
Mogadishane
Botswana

Dear Madam,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH


The above matter refers with particular reference to your letter dated 27th February 2015.

Kindly be informed that your request to conduct research on occupational stress and its effect on the Psychological wellbeing among individual in the DP? has been approved.

Please contact the writer hereof should you require more information and clarity on the subject matter.

Thank you.

Yours faithfully,


Priscilla K. Israel
Assistant Director of Public Prosecutions
For/Director



Zertifikat Certificado Certificat Certificate

Promouvoir les plus hauts standards éthiques dans la protection des participants à la recherche biomédicale
Promoting the highest ethical standards in the protection of biomedical research participants



Certificat de formation - Training Certificate
Ce document atteste que - this document certifies that

Lesedi Moamogwe

a complété avec succès - has successfully completed
Research Ethics Evaluation

du programme de formation TRREE en évaluation éthique de la recherche
of the TRREE training programme in research ethics evaluation

April 14, 2018
2018年4月14日

Professeur Dominique Spinaoost
Coordinateur TRREE - Coordinator



Supervisor
Programme de formation
TRREE
FPH
Programme de formation
TRREE

Ce programme est soutenu par - This program is supported by:
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