The effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity in a South African military university: The moderating role of Selflessness

by
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DECLARATION

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ABSTRACT

Identification with the organisation an individual is working for has been associated with performance (He & Brown, 2013), positive attitude, positive work outcomes, etc.; it is therefore very important to study. According to Rao et al. (2019), being associated with an organisation can develop pride in members and lead to organisational identification among employees. The aim of this research was to investigate the effect of personality traits such as Conscientiousness, Openness to Experience, and Neuroticism on Military Identity, as well as to establish the moderating role of Selflessness in these relationships. The purpose of this study was to make a commitment to reduce the capital and time that the South African National Defence Force (SANDF) invests in people who join the forces for personal gain and self-satisfaction. The findings of this report will be discussed with SANDF recruiting staff to realign recruitment and hiring requirements and procedures. A survey research design with the use of questionnaires was utilised. The questionnaires were administered at one point in time within the normal environment of students at the national military university with no interference from the researcher.

The following instruments were used to gather information from the participants. The first scale was the Big Five Inventory consisting of 44 items (John & Srivastava, 1999), the selfless scale (Dambrun, 2017), and the Norwegian Professional Identity Scale developed by Johansen et al. (2013) to measure Military Identity. The Statistical Package for the Social Sciences version 27 (IBM, 2021) was used to conduct reliability and dimensionality analyses on the collected data. Confirmatory factor analyses for each scale were conducted. The revised measurement and structural model can generally be regarded as good. Measurement and structural models were fitted to the data using structural equation modelling through Linear Structural Relationships.

The findings indicated a positive relationship between Conscientiousness and Military Identity; a positive relationship between Openness to Experience and Military Identity; and a significant negative relationship between Neuroticism and Military Identity. The findings also indicated that different levels of Selflessness had a significant impact on the level of Military Identity when Conscientiousness was set as the predictor; different levels of Selflessness had a significant impact on the level of Military Identity when Openness to Experience was set as the predictor; and different levels of Selflessness had a significant impact on the level of

Military Identity when Neuroticism was set as the predictor. The limitations of the study and recommendations for future studies are presented at the end of the report. This study's findings will help the SANDF to implement better recruitment strategies.

Keywords: Conscientiousness, Openness to Experience, Neuroticism, Selflessness, Military Identity

OPSOMMING

Identifikasie met die organisasie waarvoor 'n individu werk is geassosieer met prestasie (He & Brown, 2013), positiewe gesindheid, positiewe werksuitkomste, ens.; dit is dus baie belangrik om te studeer. Volgens Rao et al. (2019), om met 'n organisasie geassosieer te word, kan trots op lede ontwikkel en lei tot organisatoriese identifikasie onder werknemers. Die doel van hierdie navorsing was om die effek van persoonlikheidseienskappe soos Pligsgetrouheid, Openheid vir Ervaring en Neurotisisme op Militêre Identiteit te ondersoek, asook om die modererende rol van Onbaatsugtigheid in hierdie verhoudings vas te stel. Die doel van hierdie studie was om 'n verbintenis te maak om die kapitaal en tyd wat die Suid-Afrikaanse Nasionale Weermag (SANW) belê in mense wat by die magte aansluit vir persoonlike gewin en selfbevrediging te verminder. Die bevindinge van hierdie verslag sal met die SANW se werwingspersoneel bespreek word om werwings- en aanstellingsvereistes en -prosedures te herbelyn. 'n Opname-navorsingsontwerp met die gebruik van vraelyste is gebruik. Die vraelyste is op 'n tydstip binne die normale omgewing van studente aan die nasionale militêre universiteit geadministreer sonder inmenging van die navorser.

Die volgende instrumente is gebruik om inligting van die deelnemers in te samel. Die eerste skaal was die Groot Vyf Inventaris bestaande uit 44 items (John & Srivastava, 1999), die onbaatsugtige skaal (Dambrun, 2017) en die Noorse Professionele Identiteitskaal wat ontwikkel is deur Johansen et al. (2013) om Militêre Identiteit te meet. Die Statistiese Pakket vir die Sosiale Wetenskappe weergawe 27 (IBM, 2021) is gebruik om betroubaarheid- en dimensionaliteitsontledings op die versamelde data uit te voer. Bevestigende faktorontledings vir elke skaal is uitgevoer. Die hersiene meting en strukturele model kan oor die algemeen as goed beskou word. Meting en strukturele modelle is by die data gepas deur gebruik te maak van strukturele vergelykingsmodellering deur Lineêre Strukturele Verwantskappe.

Die bevindinge het 'n positiewe verband tussen Pligsgetrouheid en Militêre Identiteit aangedui; 'n positiewe verhouding tussen Openheid vir Ervaring en Militêre Identiteit; en 'n beduidende negatiewe verband tussen Neurotisisme en Militêre Identiteit. Die bevindinge het ook aangedui dat verskillende vlakke van Onbaatsugtigheid 'n beduidende impak op die vlak van Militêre Identiteit gehad het wanneer Pligsgetrouheid as die voorspeller gestel is; verskillende vlakke van Onbaatsugtigheid het 'n beduidende impak op die vlak van Militêre

Identiteit gehad toe Openheid vir Ervaring as die voorspeller gestel is; en verskillende vlakke van Onbaatsugtigheid het 'n beduidende impak op die vlak van Militêre Identiteit gehad toe Neurotisisme as die voorspeller gestel is. Die beperkings van die studie en aanbevelings vir toekomstige studies word aan die einde van die verslag aangebied. Hierdie studie se bevindinge sal die SANW help om beter werwingstrategieë te implementeer.

Sleutelwoorde: Pligsgetrouheid, Oopheid vir ervaring, Neurotisme, Onbaatsugtigheid, Militêre Identiteit

ACKNOWLEDGEMENTS

DEDICATION

This thesis is dedicated to

my late sister, Aydene Nicole Chanel Solomons

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LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
AIC	Akaike information criterion
ANOVA	Analysis of variance
BFI	Big Five Inventory
CAIC	Corrected Akaike information criterion
CFA	Confirmatory factor analysis
CFI	Comparative Fit Index
CN	Critical N
df	Degrees of freedom
ECVI	Expected Cross-Validation Index
EFA	Exploratory factor analysis
FFM	Five Factor Model
GFI	Goodness of Fit Index
IFI	Incremental Fit Index
KMO	Kaiser-Meyer-Olkin
NCP	Non-centrality parameter
NEO PI-3	NEO Personality Inventory-3
NEO PI-R	Revised Personality Inventory
NFI	Normed Fit Index
NNFI	Non-Normed Fit Index
NPIS	Norwegian Professional Identity Scale
OCB	Organisational Citizenship Behaviour
PAF	Principal axis factoring
PGFI	Parsimony Goodness of Fit Index
PNFI	Parsimony Normed Fit Index
RFI	Relative Fit Index
RMSEA	Root mean square error of approximation
RMSR	Root mean square residuals
SANDF	South African National Defence Force

SCT   Self-categorisation theory

SEM   Structural equation modelling

SIT   Social identity theory

SNCP   Scaled non-centrality parameter

SPSS   Statistical Package for the Social Sciences

USA   United States of America

LISREL   Linear Structural Relationships

SD   Standard deviation

CHAPTER 1

INTRODUCTION

1.1   INTRODUCTION AND BACKGROUND OF THE STUDY

Organisations with long-term plans and orientations attempt to cultivate or instil strong feelings of organisational identification among their employees. This is done with the aim of attempting to ensure employee retention, enhance employees' acceptance of the values and norms of the organisation (Hamzagić, 2018), and increase belongingness and oneness with the organisation (Kim et al., 2010). In fact, retention, acceptance of the values and norms of the organisation, belongingness and oneness with the organisation, organisational commitment, and organisational citizenship are sacrosanct in military organisations (Kim et al., 2010). A form of organisational identification in military organisations is Military Identity. This study aimed to examine organisational identity in general and Military Identity as specific to the military organisation. Brown et al. (2006) reckon that identification with the organisation an individual is working for has been associated with performance, positive attitude, positive work outcomes, etc.; hence, these authors have indicated that it is very important to study.

According to Rao et al. (2019), being associated with an organisation can develop pride in members and lead to organisational identification among employees. A study conducted by Rao et al. (2019) demonstrated that individual factors are also important in increasing identification, including tenure, collectivism, biodata, need for affiliation, and gender. Furthermore, Rao et al. (2019) outlined three broad areas of organisational identification outputs from the perspective of the social identity theory (SIT). Firstly, employees build their identities by aligning themselves with the organisation. Secondly, outputs such as altruism, cohesion, positive evaluations, and cooperation are affected by organisational identification. Lastly, as organisational identification becomes stronger in members, practice and values become distinct. Several positive outcomes from organisational identification have been identified by research conducted by Rao et al. (2019). These include job satisfaction, in-role and extra-role behaviour, financial contribution, turnover and turnover intention, compliance with organisational norms, hours worked, intrinsic motivation and task performance, coordination and decision making, alienation, performance effectiveness, task involvement,

and defending the organisation (Rao et al., 2019). Furthermore, Riketta (2005) has associated organisational commitment with attitudinal organisational commitment.

Organisational identification is more salient in military organisations where it is often associated with such pivotal variables as loyalty, military discipline, etc. A form of organisational identification in military organisations is Military Identity. Todorovic et al. (2017) is of the view that a military unit is an organised and unified social group with a specific social function, with strict subordination in relationships, where members feel a social and psychological connection with the unit, where collective interests are very important. These authors indicate that all military organisations seek employees who will advocate for the organisation's mission and act responsibly with the aim of achieving the objectives of the operational and working groups to which they belong. Accordingly, the primary task of the management of military organisations is not only the management of the members who are committed to the organisation, but also of the officers and soldiers who identify with the organisational mission.

The SIT states that an individual's self-knowledge comprises both personal identity, intrinsic characterisations such as personality traits, and social identity, which refers to the sense of identifying with whichever group the individual belongs to (Tajfel & Turner, 1986). In the military, this idea, the fostering of social identity, is largely used as a mechanism to reduce individualism, support obedience, and nullify all occurrences of non-uniformity. Tajfel and Turner (1986) are of the view that the structure, formality and uniformity, belittlement, and pressure are profoundly important in defining and instituting a larger social identity that suppresses personal identity. The high standards, regulations on presentations, grooming standards, and conduct are significantly regulated and enforced. This is foundational to instituting social identity that removes individualism to best support military functions and movements, and to win wars. According to Whitehouse (2012), groups who collectively experience pain, turmoil, catastrophe, or significant life events tend to form stronger social bonds and become more cohesive. This essentially characterises military organisations.

He and Brown (2013) argue that functional perspective identities are made up of essential, objective, and often tangible features. These authors are of the view that functionalist approach studies often lead to attempts to categorise organisations' identities and identity responses to environmental cues, and to concerns with the definition of formal identity

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constructs with putative explanatory and even predictive powers. Whetten and Mackey (2002) argue that organisations are social actors with legal status whose identities can be discerned through their collective entity-level commitment, obligations, and actions.

The functionalist approach focuses on imposing a point of view on organisational members and minimises the processes in which sense is made by participants of complicated actions, events, and histories, and is insensitive to discourse and the embodied nature of cognition. He and Brown (2013) mention that psychodynamic and psychoanalytic perspectives on organisational identification complement realist and rationalist approaches by drawing attention to unacknowledged unconscious processes in organisations that shape collective identities. Driver (2009) analysed organisational identity as a defensive solution to the psychological threats to participants that emanate from their often contradictory and conflicting individual aims. Driver (2009) articulates a different understanding of organisational identity and emphasises its imaginary character. In this version of the concept, actual identities are unknowable and attempts to define organisations identities are illusions or fantasies.

Understanding the relationship between individuals and their organisations is of fundamental interest to organisational psychology researchers. Research has indicated several precedents of organisational identification. For example, Markus and Wurf (1987) mention that individuals become attached to their organisations when they incorporate the characteristics they attribute to their organisation into their own self-concept, which is an interpretive structure that mediates how people behave and feel in a social context. Grice et al. (2002) are of the view that when a person's self-concept contains the same attributes as those in the perceived organisational identity, this cognitive connection is defined as organisational identification. Organisational identification is one form of psychological attachment that occurs when members adopt the defining characteristics of the organisation as defining characteristics for themselves.

According to Van Dick (2001), organisational identification allows an individual to participate in accomplishments beyond his/her powers and can render personally harmful activities worthwhile insofar as they aid the larger self. According to this perspective, organisational identification is a specific form of social identification where the individual defines him- or herself in terms of their membership of a particular organisation.

By identifying with a group, people perceive themselves as psychologically intertwined with the group's fate, sharing its common destiny, and experiencing its successes and failures. People who identify with their organisation sacrifice more effort and time, and they stay longer with the organisation (Van Dick, 2001).

The aim of this research was to investigate the effect of personality traits of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity, as well as to establish the moderating role of Selflessness in the effect of the personality traits on Military Identity. The aim of this study was to make recommendations to reduce the capital and time that the South African National Defence Force (SANDF) invests in people who join the forces for personal gain and self-satisfaction. The findings of this report will be discussed with SANDF recruiting staff to realign recruitment and hiring requirements and procedures.

1.2   PROBLEM STATEMENT

Soldiers with low levels of Military Identity present the military with several challenges, which could lead to ill-discipline within the organisation. There have been numerous incidents that hint that low levels of Military Identity could be the result of ill-discipline. Some members of the SANDF have allegedly been involved in numerous incidents involving lack of discipline. For example, allegations of sexual exploitation and abuse, as well as sexual harassment and violence, are plaguing United Nations missions involving SANDF members. According to Fleischmann (2020), since 2015, 28 suspected cases of sexual exploitation and abuse against South African soldiers in the Democratic Republic of the Congo have been recorded. On 25 April 2018, the South African cabinet held a meeting in Tuynhuys, Cape Town, during which the SANDF's reaction to sexual exploitation and abuse allegations against SANDF soldiers in the Democratic Republic of the Congo was discussed (Fleischmann, 2020). The cabinet acknowledged that ill-discipline within the SANDF would not be accepted (Fleischmann, 2020). According to Bester and Van't Woud (2016), in their review of South African news articles, it is evident that the South African military management is in crisis, with specific reference to greed, corruption, and lack of leadership. These authors are of the view that this confirms that leadership incompetence manifests itself in various ways in the SANDF. The alleged attack on Mr Collins Khoza by soldiers of the SANDF, which resulted in his death, raises questions about discipline among some SANDF members. After the deployment of the SANDF in March 2020, there have been a host of disturbing media stories in which the SANDF has

displayed ill-discipline. These stories include the abuse of South African citizens during the COVID-19 lockdowns, general misconduct, undermining human rights and personal dignity, and a lack of common sense.

Based on these observations, the study sought to address the following questions:

- To what extent do Conscientiousness, Openness to Experience, and Neuroticism affect Military Identity?
- To what extent does Selflessness have a moderating effect on the relationship between Conscientiousness and Military Identity?
- To what extent does Selflessness have a moderating effect on the relationship between Openness to Experience and Military Identity?
- To what extent does Selflessness have a moderating effect on the relationship between Neuroticism and Military Identity?

1.3   RESEARCH OBJECTIVES

The study sought to achieve the following primary objective:

- To investigate the effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity and the moderating role of Selflessness in these relationships in a South African military university.

The study sought to achieve the following secondary objectives:

- To establish if Conscientiousness has a significant positive effect on Military Identity.
- To establish if Openness to Experience has a significant positive effect on Military Identity.
- To establish if Neuroticism has a significant negative effect on Military Identity.
- To establish whether Selflessness moderates the effect of Conscientiousness on Military Identity.
- To establish whether Selflessness moderates the effect of Openness to Experience on Military Identity.

- To establish whether Selflessness moderates the effect of Neuroticism on Military Identity.

1.4   HYPOTHESES

This section presents the study's hypotheses. Evidence to support these hypotheses will be discussed in the empirical literature review.

Based on the theoretical and empirical evidence, the following hypotheses are proposed:

H_{a1}: Conscientiousness has a positive significant effect on Military Identity.

H_{01}: Conscientiousness does not have a significant effect on Military Identity.

H_{a2}: Openness to Experience has a positive significant effect on Military Identity.

H_{02}: Openness to Experience does not have a significant effect on Military Identity.

H_{a3}: Neuroticism has a negative and significant effect on Military Identity.

H_{03}: Neuroticism does not have a significant effect on Military Identity.

H_{a4}: Selflessness has a significant moderating effect on the relationship between Conscientiousness and Military Identity.

H_{04}: Selflessness does not have a significant moderating effect on the relationship between Conscientiousness and Military Identity.

H_{a5}: Selflessness has a significant moderating effect on the relationship between Openness to Experience and Military Identity.

H_{05}: Selflessness does not have a significant moderating effect on the relationship between Openness to Experience and Military Identity.

H_{a6}: Selflessness has a significant moderating effect on the relationship between Neuroticism and Military Identity.

H_{06}: Selflessness does not have a significant moderating effect on the relationship between Neuroticism and Military Identity.

1.5   SIGNIFICANCE OF THE STUDY

This study is a response to an identified void in the literature on the effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity in the SANDF, and the moderating role of Selflessness in such a potential causal relationship. Besides its contribution to the broad body of scientific research on the topic, this study has intra-organisational benefits. It aims to illuminate the effect of selected personality traits on the behaviour of prospective SANDF recruits. This study could enhance selection techniques by providing interventions that are cost-effective and generalisable. The study broadens research on the Big Five personality factors, Selflessness, and Military Identity. Specifically, it contributes to the body of knowledge within the fields of Organisational Psychology and Career Psychology.

The findings of this study may inform the implementation of better selection methods based on personality traits. In addition, the introduction of selflessness awareness programmes and interventions within the SANDF will result in positive workplace behaviour.

1.6   STRUCTURE OF THE STUDY

The structure of this study in terms of the chapter outline of this research is as follows:

Chapter 1

This is an introductory chapter that outlined the background of the topic under study, as well as the problem statement, research objectives, hypotheses, and significance of the study. This introductory chapter clarified the background and justification of the study and presented a brief overview of organisational identification and social identity theories. Thereafter, the research problem and the objectives of the study were presented. A discussion of the hypotheses and significance of the study concluded this chapter.

Chapter 2

This chapter provides a review of existing theories in relation to the specific topic under study. Conceptual and empirical literature is also outlined in Chapter 2, which provides the reader with the importance of the literature for this research and review the relationships among the variables that were studied. This task is initiated by providing a brief explanation of the SIT and the self-categorisation theory (SCT). Thereafter, the chapter provides a conceptual

literature review on the different dimensions of Military Identity, the Big Five personality types (Openness to Experience, Conscientiousness, Neuroticism), and Selflessness. This chapter provides an empirical literature review on the relationships between Conscientiousness, Openness to Experience, Neuroticism, and Military Identity, as well as the moderating role of Selflessness in these relationships. This chapter concludes by providing a conceptual model for this study.

Chapter 3

This chapter discusses the research methodological approach, the research philosophy and approach, the target population, the size of the sample and the sampling technique, the research instruments used, the procedures for data collection, and the statistical analysis of the collected data. The methodology section incorporates the research hypotheses, research design, sampling strategy, data-collection procedures, and measuring instruments.

Thereafter, data-analysis approaches and techniques, including dealing with missing values, and statistical analysis, including reliability analysis, confirmatory factor analysis (CFA), structural equation modelling (SEM), and regression analysis are presented.

Chapter 4

In this fourth chapter, the results of the data analysis, inclusive of item analysis, dimensionality analysis through exploratory factor analysis (EFA), CFA of one multidimensional scale, and structural model and measurement model fit assessment, are presented. This leads to decisions regarding the reliability, validity, power assessment, and rejection or substantiation of the hypotheses of the study.

Chapter 5

The results that were presented in Chapter 4 are discussed in this chapter, and summaries are presented. Thereafter, the implications of these results/findings for practice, theory, and future research are presented. The chapter concludes with the presentation of recommendations based on the findings.

1.7   CHAPTER SUMMARY

This chapter presented the justification of studying the relationship between individuals and their organisation, as well as the aim and background to the study. The research problem statement, research objectives, hypotheses, and significance of the study were also outlined. The structure of the subsequent chapters was outlined thereafter. The next chapter presents the study's literature review.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

This chapter discusses the theoretical, conceptual, as well as the empirical literature review. The first section reviews literature on the important constructs of the study. The theoretical framework and a conceptual literature review of Military Identity, the Big Five personality factors, and Selflessness are discussed. Thereafter, the empirical literature is reviewed by examining the relationships between the variables of the study. The chapter concludes with the development of the conceptual framework of the study.

2.2   THEORETICAL LITERATURE REVIEW

The theoretical literature review is a review of existing theories in relation to specific topics. It helps to establish the relationships and the degree to which existing theories have been investigated. This section discusses existing theories.

2.2.1   Social Identity Theory (SIT)

Tajfel (1978) developed the SIT, which states that people identify themselves as part of various groups, such as being part of a certain organisation. Individuals actively compare the communities that they feel they belong to (in-groups) and groups that they do not consider themselves members of (out-groups). To determine the worth of in-group and out-group individuals, each group analyses and compares their worth. Social categorisation, group assessment, and thus the importance of self-concept membership in a group represents an individual's social identity. Good social identity is rewarded with positive self-esteem, while negative social identity is accompanied by continued rivalry, social mobility behaviours, or cognition interventions to create a more positive impression for the in-group.

Ashcroft (2012) indicates that any social category to which a person belongs provides that person with a definition of themselves and shares the distinguishing features of their chosen group, and that when a particular social identity becomes salient, all members would behave in a manner that would become stereotypic of that in-group. This often results in competitive behaviour and often morally unacceptable behaviour. The SIT is based on the minimal group

model of Tajfel and Turner (1979), which implies that assigning individuals to groups can cause them to favour their assigned in-group over the out-group.

Tajfel and Turner (1986) are of the view that people frequently categorise both themselves and other people into different social groups based on aspects such as age, gender, organisational membership, and religious affiliation. Social classification has two purposes. The social world is firstly cognitively divided and organised, which gives the member a systematic way of defining other people. An individual is given the prototype traits of the category in which they are placed. These assignments are not necessarily reliable. Secondly, social classification gives a person a way to locate or describe themselves in a social setting. According to the SIT, the self-concept is made up of a social identity that includes prominent group classifications and a personal identity that includes distinctive traits. The perception of oneness with or belongingness to any human aggregate is therefore social identity. As a result, social identification offers a partial response to the question: "Who am I?"

Ashforth and Mael (1989) suggest four important principles on group identification. Firstly, it is believed that identification is a perceptual cognitive concept that is not always associated with particular behaviours or affected states. An individual simply needs to believe that they are psychologically connected to the fate of the group in order to identify with it rather than to exert more effort toward the collective's goals. Secondly, social identification is defined as the personality identifying with the group's accomplishments and misfortunes (Ashforth & Mael, 1989). Identification is frequently retained even in circumstances of severe loss or suffering, missed opportunities for rewards, task failure, or even anticipated failure. Thirdly, social identification and internalisation can be distinguished from each other, despite the literature's lack of clarity on the subject. Social identification refers to oneself in terms of social categories, while internalisation refers to the incorporation of values, attitudes, and other guiding principles within the self (Ashcroft, 2012). Accepting a social category as a definition of oneself does not automatically imply accepting the particular values and attitudes that are commonly associated with members of that category. Even though a person may describe themselves in terms of the organisation they work for, they may disagree with its prevalent principles, tactics, and hierarchical structures, for example. Finally, because one partially defines oneself in terms of a social referent, identification with a group is comparable to identification with a person or a reciprocal role relationship (Ashforth & Mael, 1989).

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According to Ashforth and Mael (1989), the answer to the question "Who am I?" may be found in the organisation of the individual. According to these scholars, organisational identity is thus a particular type of social identification. This quest for identity brings to mind a group of existential motives that are frequently mentioned in the literature on organisational behaviour. These reasons include quests for immortality, connectivity, purpose, and empowerment (Ashcroft, 2012). If the organisation, as a social category, is thought to embody or even reify traits that are thought to be prototypical of its members, it may very well serve the individual's needs in this way. The SIT maintains that identifying with social groups helps people to feel more confident about themselves. According to Ashforth and Mael (1989), a person's social identity might come from a variety of sources, including his/her work group, department, union, lunch group, age cohort, and fast-track group. The distinction between ideographic organisations, in which individuals display subunit-specific identities, and holographic organisations, in which individuals across subunits share a shared identity, is made by Albert and Whetten (1985).

Roccas and Brewer (2002) argue that the promotion of social identity is mostly employed within the framework of the military as a technique to curtail individualism, promote obedience, and eliminate instances of non-uniformity. Any soldier will likely mention organisational loyalty and the camaraderie among soldiers as their two favourite aspects of being in the military. These are social identities, and positive ones at that. Adversely, the establishment of a wider communal identity that suppresses personal identity is strongly influenced by the structure, formality of uniformity, belittlement, and pressure.

Although a communal identity can be advantageous in some circumstances, the military ultimately uses it to discourage individualism. This is established from the first day of training; first names are eliminated, ranks are assigned, uniforms are worn, standards are rigorous, and behaviour, presentation, and grooming regulations are strictly controlled. Overall, this lays the groundwork for establishing a social identity that eliminates individualism in order to best assist military operations, movement, and war victory. According to Whitehouse (2012), people who are part of a group that collectively goes through a traumatic event, major life change, or other big event tend to develop stronger social ties and become more cohesive. Those who go to war together tend to establish stronger relationships because of stress, difficulty, and experiences.

According to the SIT, people aspire to have a positive social identity that they enjoy, appreciate, and regard as admirable (Tajfel & Turner, 1986). In the military, this idea is frequently muddled between the admirable idea of supporting the country's freedom and pressure to conform from military power and influence, which is less of a positive social identity and more of a social identity that is assumed or moulded as a requirement. Since military members are required by law to obey and follow instructions from those appointed to ranks above them, regardless of their position, experience, or reputation, military power in the form of rank controls this conformity and supersedes all other kinds of social identity construction. Whitehouse (2012) mentions that military influence and power clearly alter many different perceptions, attributions, and motivations when used to shape social identity. The individual is lost, and subsequent environmental perceptions are altered by drastically shifting the sense of identity towards a collective social identity (while rejecting the personal identity). In the end, this idea most certainly applies to any organisation that strives to elevate social identity to the exclusion or subordination of personal identity. The best result or output may result from modulation between the two. In this regard, the military is a special instance that benefits, macroscopically and independently of ethical considerations, the defence of human freedom, in an effort to use the SIT to improve the conduct of war, and for the advancement of the world. It simply costs one their identity.

2.2.2   Self-Categorisation Theory (SCT)

The SCT was introduced by Turner (1999) and distinguishes between social and personal identities. According to this theory, social identity depends on the membership of the individual group, while personal identity is independent of the membership of the group. The SCT suggests that, based on the relative salience or importance of a given social or identity circumstance, an individual's action is motivated either by social or identity mechanisms. However, all identities can be unique at a certain moment and cause behaviour that is inspired by the complex interaction of both. According to Hartmann and Tanis (2013), the two ideas are also differentiated by their perspectives on social and private identities. Whereas the SIT implies a continuum of interpersonal and intergroup behaviour, the SCT argues that both social and private identity systems could be at work at the same time. Hartmann and Tanis (2013) are of the view that the central importance of social categorisation in shaping perception, judgement, and behaviour has long been recognised. They emphasise the

importance of the psychological borderlines that outline membership to a group, as countless studies have examined the effects of salient category membership on social functioning.

Hartmann and Tanis (2013) state that self-categorisation involves more than just the measurable characteristics of belonging to a group (such as possessing a psychology degree). Rather, it entails placing oneself in a social category and believing that one belongs to that category. Self-categorisation and belonging to a category do not necessarily have to be mutually exclusive. For example, a German citizen (with a German passport) may not identify as German and may instead identify with another national or ethnic group. One person may feel like they belong to a group but may not be perceived as so by others. The goal of the SCT is to comprehend how, when, and why people decide to classify themselves as belonging to some groups but not others. Self-categorisation should be viewed as a component of a person's self-concept, or the collection of cognitive representations that people have about themselves. Furthermore, Hartmann and Tanis (2013) define self-categorisation as the process of mentally classifying oneself and other people who belong to the same category as them as "us", as opposed to people who belong to a different category as "them". According to the SCT, categorisation is hierarchical. In other words, it recognises personal and social identity as two separate levels of self-categorisation. Personal identification is the belief that one is a singular person with distinctive features and characteristics, whereas social identity is the belief that one is part of a larger group and has qualities and characteristics that are shared with other group members.

According to Tajfel and Turner (1986), self-perception and social behaviour should be viewed as shifting along a continuum from purely interpersonal to purely intergroup features rather than as either interpersonal or intergroup in nature. The SCT aids in our understanding of self-stereotyping and other stereotyping, as well as in-group and out-group stereotyping by considering various levels of self-categorisation. The idea emphasises that people attribute to themselves traits that belong to their in-group in both situations. Self-categorisation theoretically advances the earlier social identity perspective. In addition to the hierarchical nature of self-categorisation described above, the SCT also acknowledges that self-categorisation is situational (Hartmann & Tanis, 2013). As mentioned previously, people categorise themselves according to their social identities or personal identities. This begs the

question of when and why people classify themselves under a general heading (or not). According to the SCT, whether a person categorises themselves in terms of a general category depends on how salient that category is in a particular context (Hartmann & Tanis, 2013). Salience in this context refers to how much participation in a group affects social perception and behaviour in a particular scenario, as well as how much group members regard themselves as similar to other group members and as different from members of other groups (Hartmann & Tanis, 2013).

The interaction between a particular in-group/out-group distinction's relative accessibility and fit determines whether it becomes noticeable (Oakes, 1987). The degree to which a person tends to apply self-categorisation in a variety of scenarios, as well as their immediate social setting, determines how accessible a category is to them. For instance, if a female student finds herself in a room full of male students (high situational accessibility), her gender category may mentally activate, but not in a room full of female students (low situational accessibility). An illustration of chronic accessibility would be if the same student participated in a feminist campaign or organisation that increased her awareness of and frequency with which she thinks about her gender. The fit of a category in a specific circumstance is determined by its comparative and normative fit (Turner et al., 1994). The degree to which a person feels a stronger similarity between themselves and members of their own group than between themselves and members of other groups in a given social environment is known as comparative fit. In other words, a person is more likely to define themselves in terms of their own group if there are fewer perceived differences between members of their own group and more perceived differences between their own group and a comparable group. The degree to which these observed disparities across groups match anticipated differences in meaning is known as normative fit.

Social categories become psychologically activated, which starts a depersonalisation process when people start to see themselves as interchangeable group members (Turner et al., 1994). As a result, people start to cognitively align themselves with the in-group prototype (self-stereotyping), change their views and actions from being personal to group-based, and start to include the group in their conception of themselves (Smith & Henry, 1996). This process describes how people start to think and behave in terms of their group identification. The tendency to categorise other people can be highly helpful in the military context.

2.3   CONCEPTUAL LITERATURE REVIEW

Literature on the variables that form part of this analysis is discussed in this section. This includes a brief overview of literature on the Big Five personality traits and then the Big Five traits that are relevant to this study, i.e., Conscientiousness, Openness to Experience and Neuroticism, then Selflessness, as well as Military Identity. The section also indicates to the reader the importance of the literature for this research.

2.3.1   Military Identity

Military identity is defined by Flack and Kite (2021) as a social identity developed as the civilian identity becomes less prominent as a result of military enculturation and is integrated into the self-concept. Evetts (2003) is of the view that the term "military identity" refers to an identity that adheres freely to immediate or long-term interests, accepts orders and hierarchy, understands the need to cooperate and coordinate their activity with comrades according to the specifics of the organisation, and trains to reach maximum potential in order to defend society. Military/veteran identity is defined as the prominence of past military service, beliefs, and norms in an individual's post-military sense of self (Evetts, 2003). The salience of this identity has been suggested to be a significant factor in how successfully individuals transition to civilian life. From a theoretical point of view, the concept of Military Identity is often expressed and explored in normative terms such as culture, attitudes, values, and motivation.

According to Evetts (2003) people have different views on interpreting Military Identity and how it is measured, and the impact it has on members of the military organisation. In addressing identity generally, and the military one especially, it must be taken into consideration that humans may be four-dimensional beings, namely bio, psycho, social, and cultural. According to Johansen et al. (2013), Military Identity means implicit adherence to its objectives, acceptance of specific socialisation, obedience to order, pride of distinct identity and a sense of personal involvement through the tasks received, and a reduction of physical rewards in favour of symbolic ones. To define the content of the identity concept as accurately as possible, it should be noted that it refers to how individuals act among themselves within the community and how the belonging community acts toward other communities (Evetts, 2003).

According to Johansen et al. (2013), there are four aspects/dimensions of Military Identity, namely Idealism, Professionalism, Warriors, and Individualism:

- **Idealism** refers to strong collectivism, patriotism, and altruistic values that regard military service as a way of life and a national obligation that surpass personal interest and are motivated by a greater good. In this respect, it closely resembles typical institutional values and motivations, which also appear related to features of military professionalism in general. The notion of Idealism closely resembles institutional military values that have been characterised as necessary conditions for the development and maintenance of military professionalism. Recent studies also suggest that traditional institutional military values have been underestimated both as a motivation to serve and as potentially important predictors of military effectiveness and performance (Griffith, 2008).

- **Professionalism** refers to a combination of attitudes, values, norms, skills, and behaviours that are expected from military personnel who serve in the armed forces. Ulriksen (2002) describes professionalism as the subordination of the military to democratic civilian authority, allegiance to the state and a commitment to political neutrality, and an ethical institutional culture. These principles are enshrined in values that distinguish the actions of a professional soldier, such as discipline, integrity, honour, commitment, service, sacrifice, and duty. Such values thrive in an organisation with a purposeful mission, clear lines of authority, accountability, and protocol. Professionalism is characterised by the necessity and willingness among military personnel to participate in international joint operations, a strong instrumental focus, with emphasis on the conduct of operations, in particular the development and cultivation of combat skills, and motivation to serve based on team cohesion and war comrade fellowship rather than on a desire to serve a superior cause. Military professionalism enables a soldier to build trust with colleagues and leaders. Good relations are developed because the soldiers treat civilians with respect and are sensitive to their needs. Professionalism helps soldiers to be objective when making important decisions.

- **Warrior** is a person who is engaged or experienced in warfare and a person who shows or has shown great vigour, courage, and/or aggressiveness (Ulriksen, 2002). According

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to Johansen et al. (2013), the purpose of the Warrior Ethos is to enable soldiers to place themselves in the initial state of mind that will subsequently enable them to place themselves in the controlled and specifically directed manic frenzy needed to leave them covered and in a concealed position to shoot their enemies with automatic weapons. The Warrior Ethos is necessary to consummate what military professionalism has set into motion.

- **Individualism** refers to the belief that the needs of each person are more important than the needs of the whole society or group (Wong, 2005). Individualism also refers to the actions or attitudes of a person who does things without being concerned about what other people will think. The SIT posits that an individual's self-knowledge is made of both personal identity, intrinsic characterisations such as personality traits and social identity, and the sense of identifying with whichever group the individual belongs to (Tajfel & Turner, 1986). In the context of the military, this idea of the fostering of social identity is largely used as a mechanism to reduce individualism, support obedience, and nullify all occurrences of non-uniformity.

2.3.2 Big Five personality traits

McCrae and Costa (1987) identified five universal main personality traits, namely Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. These authors used a variety of evaluation methods, such as self-assessment, quantitative testing, and observations, to develop and validate these variables. These factors are also seen as defining characteristics of personality. Matsumoto and Juang (2017) describe the Five Factor Model (FFM) that was formulated after researchers noticed similarities in the personality dimensions that had emerged across many studies, both within and between cultures. Support for the FFM arose out of factor analyses of trait adjectives from the English dictionary that were descriptive of self and others (Matsumoto & Juang, 2017). The factors that emerged from these types of analyses were similar to dimensions found in the analysis of questionnaire scales that operationalise personality. Many early contemporary studies have provided support for the cross-cultural validity of the FFM, across different countries and cultures.

As reported by Matsumoto and Juang (2017), one of the most widely used measures of the FFM in previous research is the revised Personality Inventory (NEO PI-R), which evolved to the NEO PI-3. Two of the most important traits for describing behavioural differences are Extraversion and Neuroticism. Matsumoto and Juang (2017) indicated that extraversion refers to the degree to which an individual experiences positive emotion, and is outgoing, expressive, and sociable, or shy, introverted, and avoids contact. The latter refers to the degree of emotional stability of an individual (Matsumoto and Juang, 2017). This research focuses on only three Big Five personality traits, namely Conscientiousness, Openness to Experience, and Neuroticism. These are examined below.

2.3.2.1 Conscientiousness

Conscientiousness is one of the basic personality dimensions highlighted in the concept of personality by McCrae and Costa (2003). Hough and Ones (2001) refer to Conscientiousness as the degree of organisation, perseverance, and motivation of individuals when performing goal-orientated activities. A conscientious person is characterised by rationality, orientation towards goals, and conviction about their competencies. High achievements at work result from good organisation and a tendency to maintain order, which leads to an efficient and effective employee. Features of such persons include dutifulness and proceeding according to their own moral principles. A diligent employee sets goals, and his/her high level of aspiration with a concern for perfection contributes to the success. Discipline and prudence ensure accurate planning for each objective before its execution, while perseverance and a low level of impulsivity result in the successful completion of almost every action.

As depicted in Figure 2.1, Conscientiousness has six dimensions, namely competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Schneider (2019) defines competence as the capacity of an individual to interact successfully with his or her surroundings and the capacity to successfully meet personal or societal needs, as well as to perform an activity or task. Furthermore, Schneider (2019) is of the view that competency is an underlying set of personal characteristics that facilitate superior performance. Competent employees have the ability to know what they need to know to do their jobs safely and they have been trained to do their jobs properly. Competence requires the development of knowledge and skills combined with certain other attributes. Education without training leads

to disordered work outcomes. Training without education creates employee and workforce lack of preparedness to deal with unusual circumstances that can give rise to uncontrolled risk. The education provides the theoretical support to allow a properly trained employee to achieve safe production every day.

Schneider (2019) refers to competent soldiers as officers who have been properly trained in all aspects. These aspects include shooting, fitness, operational tactics, as well as mental preparation for an operation. It is essential for service members to remain competent in this high-risk work environment because the military often requires an individual to work in unknown environments that demand the individual to be able to adapt and interact effectively with others while carrying out the task successfully. According to Schneider (2019), competence is demonstrated by the ability of soldiers to perform their duties successfully and to accomplish the mission with discipline and to standard.

Debusscher et al. (2017) refer to order as the tendency to keep one's environment tidy and well organised and having discipline in organising one's work, which will eliminate cluttering thoughts and restlessness. Having order also refers to the ability to follow orders. Following instructions is of the highest importance in the armed forces. The ability to follow instructions is what makes the army operate in a well-organised and efficient manner. This is important during trying and stressful situations. If there are no instructions to follow, a unit would easily fall into disagreement and become inefficient in completing the stipulated duty (Schneider ,2019).

Dutifulness has been defined as an orientation to follow socially prescribed norms for impulse control, to be goal directed, resourceful, able to delay gratification, and to follow norms and rules (Jackson et al., 2010). Dutifulness can also be defined as performing the duties required by social or legal obligations and being obedient and submissive to natural or legal superiors. Dutifulness as a personality trait is a powerful predictor of job performance in an environment such as the military where an individual must be obedient to superiors and follow orders unquestioningly. Jackson et al. (2010) posits that striving is one of the prime motivators in humans. It refers to a drive to fulfil one's potential no matter how much we may have accomplished at any point in our lives; if we do not continue to grow and strive upward, feelings of inferiority would result. Research has demonstrated a clear relationship between achievement striving and social interaction (Azeez & Azeez, 2009).

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The commonly accepted definition of self-discipline is the ability to control one's feelings and overcome one's weaknesses (Matsumoto & Juang, 2017). It is the ability to pursue goals despite temptations to abandon them. Self-discipline can be a blanket term for all the individual responsibilities that one must fulfil or complete. Some examples of individual responsibilities that require self-discipline within the profession are physical fitness, medical readiness, and professional military education. Self-discipline in the workplace is another critical aspect of the profession. Within the military profession, being self-disciplined includes having the ability to place personal opinions and biases aside and tackle the task at hand with a clear understanding of the required end state. It is the ability to recognise risk versus reward and clearly visualise the goal as it pertains to each intermediate task between the start and finish (Matsumoto & Juang, 2017).

According to Matsumoto & Juang (2017), deliberation is not an individual monologue, but a substantial consideration of ideas by multiple group members who advance different perspectives. Deliberation encourages members to acknowledge others' viewpoints and consider them in relation to their own viewpoints. The inability or unwillingness to consider opposing viewpoints leads to uninformed, and often indefensible, resolutions.

Figure 2.1

The six dimensions of Conscientiousness
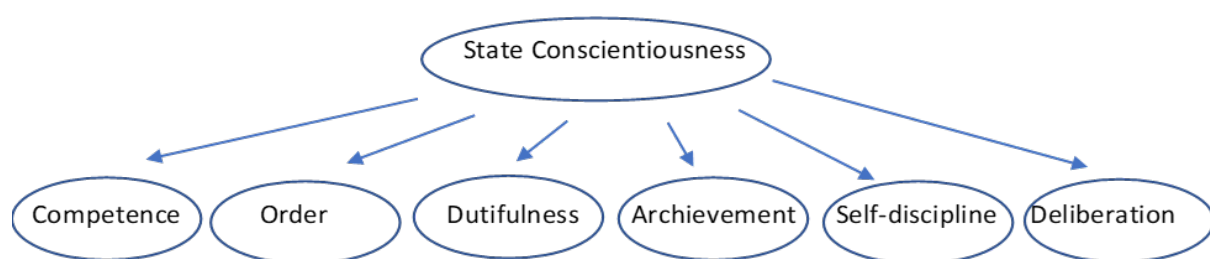
Mount and Barrick (1995) argue that Conscientiousness can be divided into two domains, namely achievement and dependability. Achievement is the capacity to work hard and meet challenges, whereas dependability reflects a more interpersonal component of Conscientiousness that manifests in traits of responsibility and dutifulness. Hough and Ones (2001) proposed a taxonomy of Conscientiousness-related traits that considered the factor

structure and patterns of validity across personality scales. This model identified one global Conscientiousness domain and six facets of Conscientiousness. These are achievement, dependability, impulse control, order, being moralistic, and persistence. Achievement or goal orientation describes how individuals perceive and respond to achievement situations such as learning, classroom performance, or game play. Individuals may be intrinsically motivated by the pleasure of mastering a new topic or content being learned, curiosity about the subject matter, or the sense of expertise as knowledge grows.

Hough and Ones (2001) refer to dependability as the quality of being able to be relied on, trustworthiness, or constancy. Dependable employees respect deadlines and make every effort to meet them. Meeting deadlines is accomplished through proper planning and using work hours effectively. Management is more likely to give important projects to dependable employees because they know that the job will get done if the team member has accepted the responsibility. Some employees even go above and beyond the task that is expected from them.

Mount and Barrick (1995) point that impulse control refers to the difficulty some people have in stopping themselves from engaging in certain behaviours. Having a sudden impulse or desire to do something is a trait that most people share. However, those with impulse control disorders find it extremely difficult or impossible to regulate their impulses or desires. Impulse control disorders are characterised by urges and behaviours that are excessive and/or harmful to oneself or others and cause significant impairment in social and occupational functioning, as well as legal and financial difficulties.

Order refers to the arrangement or disposition of people or things in relation to each other according to a particular sequence, pattern, or method (Hough & Ones, 2001). Moralistic refers to being overly fond of making moral judgements about others' behaviour; in other words, being too ready to moralise (Hough & Ones, 2001). Persistence is continuing in an opinion or course of action despite difficulty or opposition (Hough & Ones, 2001). According to Johansen et al. (2013), one of the best predictors of various performance measures was found to be Conscientiousness. In support of this, recent studies of military subjects have found Conscientiousness to be associated with increased leadership performance, as well as with higher skill ratings among military cadets and service teams (Hough & Ones, 2001). The military environment often requires a soldier to possess leadership skills to lead subordinates'

teammates or peers in difficult situations. For this reason, Conscientiousness was included as one of the personality traits to be measured in this study.

2.3.2.2 Openness to Experience

Openness to Experience, according to McCrae and Costa (2003), is the capacity and propensity to investigate sensory and aesthetic information through perception, imagining, and creative endeavor. Furthermore, these authors refer to Openness to Experience as the extent to which people think in broad and deep ways, and the permeability of boundaries in their consciousness and experience. Moreover, McCrea and Costa (2003) mention that openness in general reflects the degree to which information can flow in multiple directions within an entity (person/classroom/society), thereby encouraging or minimising diversity of thought, feeling, and action. This study adopted the aforementioned definition of Openness to Experience. Openness to Experience is expressed by a need to expand and examine experience. According to Nicolaou et al. (2020), openness to experience refers to how much a person allows themselves to be influenced by both internal and external factors.

McCrae and Costa (2003) describe people with Openness to Experience as inquisitive, versatile, brilliantly imaginative, inventive, and imaginatively aware. According to Nicolaou et al. (2020), people who rank high in Openness to Experience have a wide variety of educational interests and are always looking for experiments. These individuals are also expected to have different careers, to pursue different occupations, and to expect more extensive life skills than people with a low level of transparency. McCrae and Costa (2003) are of the view that a person with a high level of Openness to Experience will often enjoy venturing beyond his/her comfort zone. They seek out new, unconventional, and unfamiliar experiences, travel to new destinations, and embrace different cultures and practices.

Matsumoto and Juang (2017) describe six dimensions of Openness to Experience. These are fantasy, aesthetics, feelings, actions, ideas, and values. Fantasy is a broad range of mental experiences, mediated by the faculty of imagination in the human brain, and marked by an expression of certain desires through vivid mental imagery. A person who scores high in the fantasy dimension will typically create scenarios that are statistically implausible (Matsumoto & Juang, 2017). Matsumoto and Juang (2017) posit that in psychology, aesthetics involves the study of our interactions with artwork, our experiences of beauty and ugliness, our preferences and dislikes, and our everyday perceptions of things in our world. High scores in

aesthetics indicate high levels of interest, pleasure, and arousal. Matsumoto and Juang (2017) describe feelings as subjective, evaluative, and independent of the sensations, thoughts, or images that evoke them.

Those who score high in this dimension are often aware of their feelings, and those who score low are less aware of their feelings and not very good at expressing emotions. Action refers to an activity or process that can be observed and measured (Matsumoto and Juang, 2017). These activities and processes are often initiated in response to stimuli, which are either internal or external. Those who score high in this dimension of Openness to Experience love travelling to new places, experiencing new things, and trying new activities and hate routine.

Figure 2.2

The six dimensions of Openness to Experience
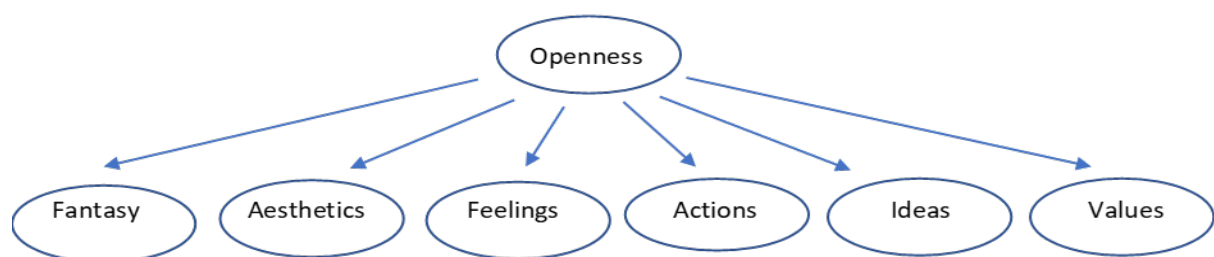
In cognitive psychology, an idea is a mental image or cognition that is ultimately derived from experience but may occur without direct reference to perception or sensory processes (Matsumoto & Juang, 2017). Those with a high score for this dimension love to play with and debate ideas, engage in intellectual discussions, and enjoy puzzles, riddles, and brain teasers. Values are internalised cognitive structures that guide choices by evoking a sense of basic principles of right and wrong, a sense of priorities, and a willingness to make meaning and see patterns. Those with high scores for this dimension tend to challenge authority and question traditional values. At its most extreme, this facet can mean hostility to the law and established rules (Matsumoto & Juang, 2017). Johansen et al. (2013) are of the view that those who enjoy venturing beyond their comfort zone and seek out new, unconventional, and unfamiliar experiences, travel to new destinations, and embrace different cultures and practices are

fundamental to the armed forces. Research also indicates that the impact of Military Identity and service values on skills and competence is difficult to establish. It is therefore difficult to find studies that have examined the direct link between different aspects of Military Identity and individual competence and skills.

2.3.2.3 Neuroticism

McCrae and Costa (2003) describe persons who are anxious, aggressive, self-conscious, uncertain, and vulnerable as neurotic. Nicolaou et al. (2020) mention that Neuroticism is the trait disposition to experience negative effects, including anger, anxiety, self-consciousness, irritability, emotional instability, and depression. According to Matsumoto and Juang (2017), one of the dimensions of Neuroticism is anxiety, which is an emotion characterised by feelings of tension, worried thoughts, and physical changes such as increased blood pressure.

Those who score high in this dimension usually have recurring intrusive thoughts or concerns and avoid certain situations out of worry. Another dimension of Neuroticism is hostility, which refers to an emotion characterised by tension and anger arising from frustration, real or imagined injury by another, or perceived injustice. It can manifest in behaviours designed to remove the object of the anger. Those who score high in this dimension tend to have negative and destructive attitudes towards others (Matsumoto & Juang, 2017).

Figure 2.3

The six dimensions of Neuroticism
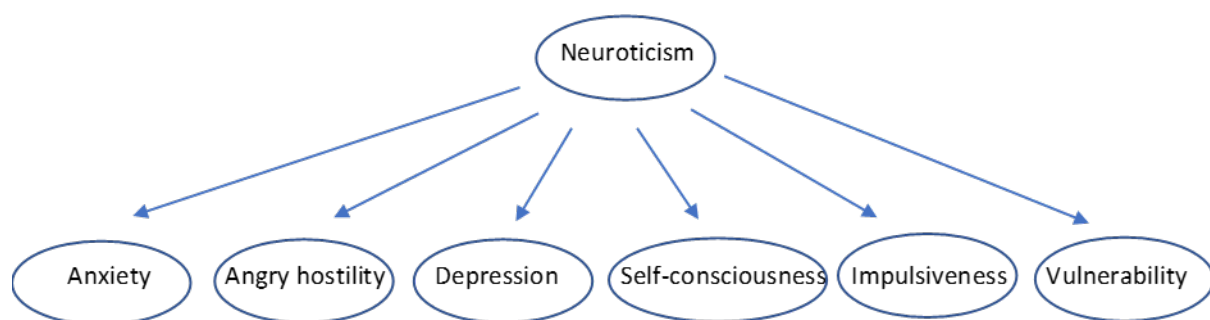
McCrae and Costa (2003) describe depression as a serious condition that negatively affects how a person thinks, feels, and behaves. It often interferes with a person's ability to experience or anticipate pleasure, and significantly interferes with functioning in daily life. Matsumoto and Juang (2017) outline self-consciousness as one of the dimensions of Neuroticism. These authors describe this dimension as a heightened sense of awareness of oneself. In the contemporary sense of the term, self-consciousness is a preoccupation with oneself, especially with how others might perceive one's appearance or one's actions. Impulsiveness is further defined as a Neuroticism dimension by Matsumoto and Juang (2017). According to these authors, impulsive behaviors frequently take place fast without thought, preparation, or control. People high in impulsiveness cannot resist doing what they do not want to do and often find it difficult to control themselves. Vulnerability refers to a person's openness and willingness to risk being hurt emotionally, such as being willing to love and be loved and to accept the emotional risks that go with it. Those who score high in this dimension are more willing to risk being hurt emotionally. According to Johansen et al. (2013), it is fundamental that a soldier is always calm in difficult situations. Soldiers should always be in control of their emotions and be able to avoid negative emotions. Neurotic individuals do not identify with the military as they are unable to remain calm in stressful situations and they become easily irritated and angry. These individuals are often uncertain and exposed. In the military, it is often required that a soldier maintains confidentiality and be firm when he/she makes decisions.

2.3.3 Selflessness

According to Neff (2003), selflessness is described as addressing the needs of others, the readiness to serve and sacrifice for others, and the willingness to set aside one's own interests and needs in order to achieve the greatest good for others. Daum (2015) describes selflessness as having little or no respect for oneself, particularly in terms of fame, position, money, and so forth. Daum (2015) further defines Selflessness as "concerned more with the needs and wishes of others than with one's own". Selfless people show service and sacrifice, and they extend themselves for others and seek their greatest good. The definition that was adopted for this study is that of Neff (2003), namely meeting the needs of others, the will to serve and sacrifice for others, and the willingness to set aside one's own wants and needs to seek the greatest good for others. Neff (2003) suggests two qualitative distinctive

characteristics of self-associated psychological functioning. The two principal dimensions that induce this mode of functioning are self-centredness and an overstatement of self-assumed status. Self-centredness is where the self has a dominant frame of reference with respect to psychological behaviour. People who are self-centred will portray traits that are narrow-minded. One of the features of Selflessness, as recognised by Neff (2003), is that a person does not consider their interest as more important than that of others, but rather puts others' interests first. Such people appear to be kind, polite, and emphatic. Various scholars agree that Selflessness is closely related to self-transcendence, intelligence, and a silent ego (Neff, 2003).

According to the military's code of conduct and ideals, selfless service is defined as putting the welfare of the nation, the Army, and your subordinates ahead of your own. Selfless service encompasses more than one individual. You are doing your duty without regard for recognition or benefit when you serve your country. As an Army, we are frequently committed to something larger than the individual soldier; a collective purpose that brings together various people and units to complete the work at hand. Our great military past is full with examples of troops from all walks of life proudly placing the mission and the welfare of others ahead of their own (Defence Act 42 of 2002).

2.4   EMPIRICAL LITERATURE REVIEW

This section reviews literature in terms of the relationships among the variables of the study gathered from previous studies so as to provide evidence or a record of other researchers' findings that were analysed quantitatively or qualitatively. The relationships between variables will be discussed below in conjunction with previous studies pertaining to empirical findings on the relationships. The relationships that will be reviewed is the relationship between Conscientiousness and Military Identity, the relationship between Openness to Experience and Military Identity, the relationship between Neuroticism and Military Identity, and the moderating role of Selflessness in the relationship among, Conscientiousness, Openness to Experience, Neuroticism, and Military Identity

2.4.1 Relationship between Conscientiousness and Military Identity

As expounded above, Conscientiousness is characterised by diligence, rationality, orientation towards goals, and an individual's personal conviction about his/her competencies. According to McCrae and Costa (2003), conscientious individuals tend to be disciplined and prudent. Discipline and prudence ensure accurate planning for each objective before its execution, while perseverance and a low level of impulsivity result in the successful completion of almost every action. Iversen and Greenberg (2009) are of the view that the nature of military service demands compliance with orders and authority, sometimes in situations in which life or death depends upon that compliance. The high Conscientiousness of personnel is related to greater levels of compliance with orders, discipline, and orientation (Iversen & Greenberg, 2009).

Hough and Ones (2001) argue that achievement is one of the dimensions of Conscientiousness. An individual who is achievement orientated has the capacity to work hard and meet challenges, whereas dependability reflects a more interpersonal component of Conscientiousness that manifests in traits of responsibility and dutifulness. Members serving in the armed forces need to be responsible and dutiful, as indicated in the Code of Conduct for uniformed members of the SANDF. This is especially essential in a mission area where the individual is faced with a dilemma to kill to achieve the objectives of the mission. Furthermore, Salgado's (1998) research on the performance of work by soldiers and civilians showed that Conscientiousness and diligence are important predictors of Military Identity. Barrick and Mount (1991) indicate that individuals who score high in Conscientiousness tend to be dependable, careful, thorough, responsible, organised, and resourceful. Because highly conscientious individuals are hardworking, achievement orientated, and perseverant, they tend to do what needs to be done to accomplish the work.

Military Identity is associated with the armed forces' prevailing goals, values, and tasks, representing the degree to which soldiers and officers are motivated and willing to internalise these and establishing important organisational behaviours such as compliance, extra-role pro-organisational behaviour, loyalty, improved performance, reduced absenteeism, and higher levels of physical and emotional wellbeing (Barrick & Mount, 1991). Military professionalism enables the military to be effective in its undertakings. Professionalism entails excellent literacy and practical skills connected to the military, as well as high ethical

standards, reasonable work motivation, good morale, and good relationships with colleagues. The concept of professionalism is closely related to competence. All these elements appear fundamental to the functioning of the armed forces; thus, linking Military Identity to both the SIT and Conscientiousness.

It would then be expected that an individual who scores high in Conscientiousness would also highly identify with the military organisation. This is because there is a relationship between Military Identity and areas of individual performance (compliance with orders, hardworking, and meeting challenges) and Conscientiousness, as indicated by Johansen et al. (2013) in their study of officer cadets at war academies. These authors also found that professionalism positively predicted perceived military competence and skills. Furthermore, in their study of junior officer candidates, they also found that professionalism positively explained overall military performance.

Based on this evidence, one can agree that there is a positive relationship between Conscientiousness and Military Identity. A study by Ajzen et al. (2009) on the relationship between Conscientiousness and organisational identity indicated a strong positive relationship ($r = .70$; $p < .05$). A study conducted by Johansen et al. (2013) on Norwegian military personnel found a high correlation between Conscientiousness and Military Identity ($r = .67$; $p < .05$). Furthermore, Aboul-Ela (2018) found a significant correlation between Conscientiousness and organisational identity ($r = .71$) in her study on the Big Five model personality traits and organisational identification. On the contrary, Gualinga and Lennartsson (2020) found that there was no significant correlation ($r = 0.13$) between Conscientiousness and organisational identity,

Based on the above theoretical and empirical evidence, the following hypothesis is proposed:

H_{a1}: Conscientiousness has a positive significant effect on Military Identity.

H_{01}: Conscientiousness has no significant effect on Military Identity.

2.4.2 Relationship between Openness to Experience and Military Identity

As indicated in the conceptual literature review, McCrae and Costa (2003) posit that a person with a high level of Openness to Experience will often enjoy venturing beyond their comfort zone. They seek out new, unconventional, and unfamiliar experiences, travel to new destinations, and embrace different cultures and practices. Thomas et al. (2012) mention that people with high Openness to Experience are highly creative, they like to pay attention to detail, and prefer to do everything perfectly. They are intuitive and imaginative and can identify the artistic aspect of things and situations. Individuals who are open to experience have a great of attachment to nature, have unique thinking and a versatile approach to life, and do not fear stepping into the unknown. McCrea and Costa (2003) suggest that those open to experience get bored of routines and tight schedules and are flexible and willing to accept that their opinions can be wrong. These authors also suggest that those who are open to experience can adjust easily and contribute well to the workplace and have a flexible attitude.

Thomas et al. (2012) is of the view that soldiers are often required to learn new tasks or skills very quickly, whereas people in civilian life may be required to learn these skills in six months or more. A good soldier is thus regarded as an individual who is able to learn new skills and tasks in a short space of time. As reported by Thomas et al. (2012), the nature of military operations often requires soldiers to travel to new destinations, learn new cultures, and to do things that take them out of their comfort zone. Soldiers who are open to experience often prefer to take part in missions that will allow them to get out of their comfort zone, take risks, and step into the unknown. Furthermore, Thomas et al. (2012) state that a soldier who is flexible and accept that their opinion can be wrong can identify with the military. It would then be expected that an individual with high Openness to Experience would also highly identify with the military organisation. This is because, based on the facts stated above, there is a relationship between aspects of Openness to Experience and characteristics of an individual who identifies with the military such as getting out of your comfort zone, willingness to take risks and learn new skills, stepping into the unknown, and excepting that an opinion can be wrong.

A study by Hoffman and Woehr (2006) found an above-average positive significant correlation between organisational identity and Openness to Experience (r = .65). An above-average correlation exists among Openness to Experience and Military Identity, as indicated in a study

conducted by Thomas et al. (2012) on German military personnel ($r = .64$; $p < .05$). Xu et al. (2016), in a study on 225 working professionals in a part-time master's degree programme in an Irish business school, found a positive relationship between creativity and Openness to Experience ($p < .001$; $r = .14$). As alluded to, creativity is one of the factors that are important when considering if an individual identifies with the military and is associated with Openness to Experience.

Based on the above theoretical and empirical evidence, the following hypothesis is proposed:

H_{a2}: Openness to Experience has a positive and significant effect on Military Identity.

H_{02}: Openness to Experience has no significant effect on Military Identity.

2.4.3 Relationship between Neuroticism and Military Identity

Carver and Connor-Smith (2010) argue that Neuroticism presents the strongest links with stress since it is associated with negative emotionality, which often causes persons to experience negative emotions, which tend to remain for a lengthy time. Consequently, neurotic individuals evaluate things as a loss or a threat. Within the process of secondary stress appraisal, people with high levels of Neuroticism do not utilise their own resources to deal with stress. Carver and Connor-Smith (2010) advocate that neurotic people often have maladaptive coping strategies driven by fear or anxiety, which can be consciously or subconsciously elicited by a situation. Connor-Smith (2010) found that neurotic individuals tended to have a lower ability to focus on tasks for an extended period. As Migliore (2011) points out, this link likely occurs because people who are neurotic tend to be major worriers and struggle to filter out distractions, including in the workplace. Migliore (2011) describes Neuroticism as excessive worry that results in mental distress, inability to enjoy lifestyle activities, and emotional suffering. It includes traits such as being nervous, pessimistic, experiencing negative emotions, excessive worrying, and anxiety.

As suggested by Johansen et al. (2013), when a soldier is unable to cope defensively with a series of situations, they lose self-confidence, feel self-condemnatory, and their capacity for sociability declines and their craving for affection becomes intensified. These authors indicate that the military presents an individual with a series of life-threatening events, which require

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a soldier to focus on the task at hand for lengthy periods of time while filtering out distractions that may lead to the unsuccessful completion of the mission.

According to Johansen et al. (2013), Military Identity, as a form of organisational identity, is characterised by leadership, teamwork, open-mindedness, integrity, persistence, bravery, curiosity, love of learning, social intelligence, fairness, perspective, creativity, and self-regulation. Discipline is one top characteristic that comes to mind for most civilians when thinking of military life. Being in the military requires a significant amount of discipline, whether it is respecting military rituals, asking permission before speaking to a superior, maintaining grooming standards, or being punctual.

From the above assertions, it is obvious that a military practitioner who highly identifies with their organisation with all its military ethos is expected to be low on Neuroticism. This is because military practitioners are expected to uphold high levels of discipline, self-control, and professionalism, which are the direct opposite of Neuroticism, which is characterised by anxiety, anger, hostility, impulsiveness, and vulnerability (Connor-Smith, 2010). From this evidence it is expected that military practitioners who score high on Neuroticism will not adapt easily in the military as they are very prone to stress, driven by anxiety, and cannot focus on the task at hand for lengthy periods of time while filtering out distractions. Based on the characteristics of Neuroticism stated above, one can conclude that a neurotic individual should not fit the profile of a soldier.

A study by Aboul-Ela (2018) on uncovering the Big Five model personality traits and organisational identification in Egypt, which included industry workers, educators, and healthcare workers, found an above-average relationship between Neuroticism and organisational identity (r = .698). On the contrary, a study by Aghaz and Hashemi (2014) on the impact of personality traits on the expanded model of organisational identification, the results found that Neuroticism has an insignificant negative relationship with organisational identification (r = -.03; p < .001). Furthermore, a study conducted by Tett et al. (1991) on Norwegian military personnel found a positive, insignificant, negligible correlation between Neuroticism and Military Identity (r = .01; p < .001). Hashim et al. (2017), investigated the relationship between the Big Five personality traits and organisational citizenship behaviour (OCB) and found a negative relationship between Neuroticism and OCB (r = -0.213).

Based on the above theoretical and empirical evidence, the following hypothesis is proposed:

H_{a3}: Neuroticism has a negative and significant effect on Military Identity.

H_{03}: Neuroticism has no significant effect on Military Identity.

2.4.4 The moderating role of Selflessness in the relationship among, Conscientiousness, Openness to Experience, Neuroticism, and Military Identity

As argued above, Conscientiousness is characterised by diligence, rationality, orientation towards goals and an individual's personal conviction about his/her competencies, discipline, and prudence (McCrae & Costa, 2003), and the nature of military service demands compliance with orders and authority, sometimes in situations in which life or death rest upon that compliance (Iversen & Greenberg, 2009). High Conscientiousness of personnel is related to greater levels of compliance with orders, discipline, and orientation (Iversen & Greenberg, 2009) which compliments the profile of a soldier.

Empirical evidence also indicated a relationship between Conscientiousness and Military Identity (Ajzen et al. 2009; Johansen et al. 2013). Tett et al. (1991) opined that the main reasons why it is important for a soldier to follow the orders they are given is to be combat effective, disciplined, and to just be a good soldier. When a soldier does not follow the orders they are given, it not only hurts themselves, but it hurts the team and the goals of the mission (Tett et al., 1991). When the mission objectives are upset by not following orders, this weakens everything that is necessary to win the war. Discipline is crucial to following orders effectively, without it soldiers would not react fast enough to what is being said or would simply not care enough about the task at hand to perform it, weakening the team itself.

According to Neff (2003), Selflessness is characterised by low levels of self-centeredness and a low degree of importance given to the self. Characteristics like altruism, kindness, respect, empathy, compassion, and the need for harmony are the characteristics of individuals high on Selflessness. Acting selflessly can help members of the armed forces connect with each other because helping others makes us feel good, and in turn, the other person experiences feelings of gratitude, and as a result, we bond with each other, which promotes teamwork

which is of fundamental value in the military (Tett, 1991). It would be expected that the effect of Conscientiousness on Military Identity will be observed among individuals that are high on Selflessness but not among individuals low on Selflessness. This is because if a member of the armed forces cares about the person next to him or her as much as he cares about himself or herself, it will promote teamwork and a feeling of connectedness which will lead to identifying with fellow combatants and the military. In other words, the extent to which an individual is low on self-centredness will affect the direction/effect of Conscientiousness on Military Identity.

Schoen (2012) argues that individuals who score high on Openness to Experience always search for activities that separate their routine. This trait is salient in military organisations, hence, Openness to Experience should have a positive effect on Military Identity. People that score high on Openness to Experience trait are often characterised inquisitive mind, they enjoy encountering novel ideas and meeting new people with the aim to help others to the utmost of their ability. People high on Openness to Experience are more likely to be happy. As reported by Ulriksen (2002), a soldier high on Openness to Experience can better understand which risks are worth taking and when risky behaviours should be avoided. Members of the armed forces that score high on Openness to Experience have strong intellectual abilities, are flexible, which may lead them to seek intellectual stimulation in their occupation by taking on more challenging jobs on higher hierarchical levels.

Openness to Experience is also strongly related to divergent thinking and creativity, and one of its facets is the generation of new ideas (Ulriksen, 2002). Schoen (2012) mentioned that those individuals that are Open to Experience and score high on Selflessness tend to have no ulterior motive, no schemes, and no plans to undermine you. These individuals are usually humble, but they're not weak, which makes them more inspiring to follow. Schoen (2012) also reported that these individuals are simple, and don't have a superiority complex, a god complex, or any kind of complex that affects the workplace. There is a close relationship among selflessness and openness to experience. Schoen (2012) reported that Openness to Experience has been found to have modest yet significant associations with happiness, positive affect, and quality of life. Those open to experience connect easily with others and with nature and is more likely to identify with an organisation or group.

It would be expected that the effect of Openness to Experience on Military Identity will be observed among individuals that are high on Selflessness who are prepared to take high risks for their country, but not among individuals low on Selflessness. This could be attributed to the nature of the military where it is important to work with those who are willing to learn new things while being humble, without any ulterior motives. This promotes a healthy environment for learning while carrying out orders during an operation or task. In other words, the extent to which an individual is low on self-centredness will affect the direction/effect of Openness to Experience on Military Identity.

Gerber et al. (2011) indicate that Neuroticism is negatively associated with engagement. They mentioned that neuroticism may be a valuable psychological disposition for associational involvement. According to Modak and Halperin (2008), Neuroticism is that personality dimension which contrast emotional stability and even-temperedness with negative emotions. Neurotic people tend to possess mood swings and negative emotions often prevail. This makes them particularly susceptible to stress and psychological distress which features a major impact on organisational involvement. Thus, these individuals tend to be more self-centred. Ulriksen (2002) pointed out that service members with the personality trait of Neuroticism is considered a risk factor for stress vulnerability. When these soldiers are place in a situation where they need to keep calm and think on their feet, they become nervous and anxious, which might compromise the situation or operation. Ulriksen (2002) also pointed out that neurotic soldiers normally experience the world as distressing, threatening, and unsafe. Hence, it can be said that those high on Neuroticism will not fit the profile of a soldier. Dambrun (2017) argued that Neuroticism is a personality trait characterised by the tendency to experience negative affect. Neuroticism has been construed as one of four self-evaluation dimensions, along with locus of control, self-efficacy, and self-esteem, all of which have been implicated in both self-centeredness and depression Dambrun (2017) proposed that Neuroticism is related to hedonic principle associated with self-centeredness and fluctuating happiness.

It would also be expected that the effect of Neuroticism on Military Identity will be observed among individuals that are high on selflessness but not among individuals low on selflessness. This is because military practitioners are expected to be disciplined, take orders, be obedient, while keeping calm in a potentially stressful situation. Based on characteristics of neuroticism

presented above, neurotic individuals cannot keep calm in potential dangerous or stressful situations. In other words, the extent to which an individual is low on self-centredness will affect the direction/effect of Neuroticism on Military Identity.

According to Grant and Mayer (2009) Impression management motives can be the same as Selflessness or self-centeredness depending on the level of impression management motives. Servant leadership is a form of personality trait and job satisfaction is an organisational outcome like Military Identity. In a study by Donia et al. (2016) on servant leadership and employee outcomes with the moderating role of subordinate's motives, it was found that the relationship of servant leadership with job satisfaction was stronger among employees with low impression management motives (β = .70, p < .001) as, compared to when impression management motives were high (β = .60, p < .001). The results also shows that servant leadership and Organisational Citizenship behaviour (OCB) were significantly negatively correlated when subordinates had low prosocial values (self-centeredness) (β = −.25, p < .05), but the relationship was not significant when subordinate had high prosocial values (Selflessness) (β = −.01, n.s.). The study of Donia et al. (2016) is a reflection of how different levels of Selflessness moderates the relationship between personality traits and organisational outcomes like Military Identity.

A longitudinal study by Wegener (2020) on early childcare and youth development, that collected data on a cohort of children and their families between 1991 and 2018 in the United States found that the direct effects were nearly unchanged for self-transcendence (β = −0.46, p < 0.001), perspective-taking (β = 0.09, p < 0.003) and materialism (β = 0.09, p = 0.003). None of the coefficients for the interaction terms were statistically significant in the moderating role of selflessness in the relationships between the self-structure predictors and neuroticism.

It is important to note that subjective well-being/happiness is an outcome variable like Military Identity (Dambrun & Richard, 2011). Dambrun (2017) selflessness was positively and significantly related to authentic–durable happiness (β=.48, p< .001), even when self-centeredness was statistically controlled for (β=.48, p< .001). Selflessness and fluctuating happiness were not significantly related (β= −.02, p> .77). Self-centeredness was positively and significantly related to fluctuating happiness (β=.22, p< .001), even when selflessness was statistically controlled for (β=.22, p< .001). Self-centeredness was not related to authentic–

durable happiness (β= −.07, p> .22). Self-centeredness and selflessness were not significantly correlated (β= −.07, p> .21).

Based on the above theoretical and empirical evidence, the following hypothesis is proposed:

Ha4: Selflessness has a moderating effect on the relationship between Conscientiousness and Military Identity.

Ho4: Selflessness has no moderating effect on the relationship between Conscientiousness and Military Identity.

Ha5: Selflessness has a moderating effect on the relationship between Openness to Experience and Military Identity.

Ho5: Selflessness has no moderating effect on the relationship between Openness to Experience and Military Identity.

Ha6: Selflessness has a moderating effect on the relationship between Neuroticism and Military Identity.

Ho6: Selflessness has no moderating effect on the relationship between Neuroticism and Military Identity.

2.5   RESEARCH CONCEPTUAL MODEL

Based on the above theoretical and empirical evidence, the conceptual framework of this study is developed as presented in Figure 2.2. The model depicts Military Identity as the primary independent variable of this study, while the three Big Five military salient personality traits of Conscientiousness, Openness to Experience, and Neuroticism are independent variables. Selflessness moderates the effect of the independent variables on the dependent variable by either changing the strength or the direction of the independent variables on the dependent variable (Sekaran & Bougie, 2016).

Figure 2.4

The conceptual framework of the study
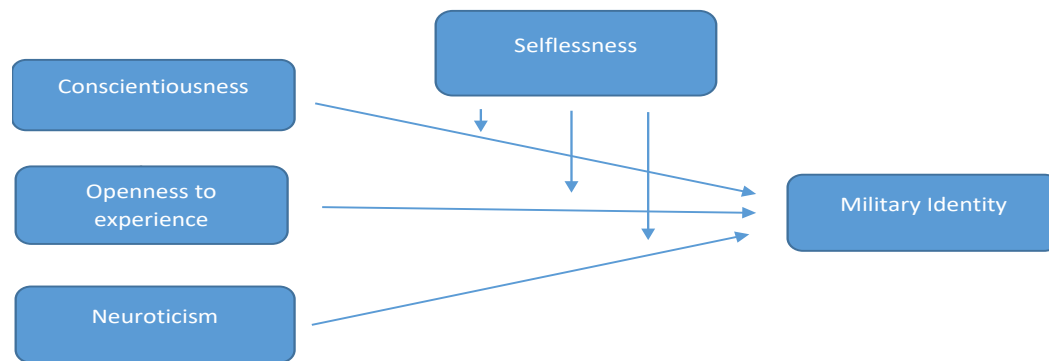
2.6   CHAPTER SUMMARY

This chapter provided a comprehensive review of literature on the topic under study. The review started with a theoretical literature review of existing theories in relation to the SIT and SCT. Thereafter, conceptual literature on the variables that are part of this study was discussed, namely Conscientiousness, Openness to Experience, Neuroticism, Selflessness, and Military Identity. Thereafter, the relationships among the constructs that culminated in the development of the hypotheses were examined. Lastly, the hypothesised conceptual model was developed from the empirical and conceptual literature. The next chapter presents the research methodology of this study.

CHAPTER 3:

RESEARCH METHODOLOGY

3.1   INTRODUCTION

An explanation of the methods that were used in this study are outlined in this chapter. Research methodology refers to the methods and techniques used during the research process (Bryman, 2012). This chapter offers information on the research design that was used to conduct this research and also outlines the collection of data, information on the instruments used to collect data, as well as the participants' characteristics. The chapter concludes with information on the ethical considerations that were observed during this study.

3.2   RESEARCH METHODOLOGY

Dudovskiy (2018) defines research methodology as the practical "how" of any given research, more specifically about how a researcher systematically designs a study to ensure valid and reliable results that address the research aims and objectives. For example, it addresses how the researcher decided on what data to collect, whom to collect it from, how to collect it, and how to analyse it. The methodology chapter should justify the design choices by showing that the chosen methods and techniques are the best fit for the research aims and objectives and will provide valid and reliable results. A good research methodology provides scientifically sound findings, whereas a poor methodology does not.

Payne and Payne (2004) mention that impactful research usually creates the minimum bias in data and increases trust in the accuracy of collected data. A design that produces the slightest margin of error in research is generally considered the desired outcome. The essential elements to be implemented to collect and analyse research data, the method(s) applied to analyse collected details, the type of research methodology, probable objections to research, and settings for the research study are discussed in the following sections.

3.2.1   Research design

Leedy (1997) defines research design as a plan for a study that provides the overall framework for collecting data. Majid et al. (2017) define research design as a plan for selecting subjects, research sites, and data-collection procedures to answer the research question(s). They

further indicate that the goal of a sound research design is to provide results that are judged to be credible. For Teegavarapu et al. (2008), research design is a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research strategy. Teegavarapu et al. (2008) mention that the researcher must clearly understand the various research design types to select the most appropriate model for a study. Like research itself, the design of one's analysis can be broadly classified into quantitative and qualitative. Quantitative research encompasses a range of methods concerned with the systematic investigation of social phenomena, using statistical or numerical data. Quantitative research involves measurement and assumes that the phenomena under study can be measured. Qualitative research aims to address questions concerned with developing an understanding of the meaning and experience dimensions of human lives and social worlds. This study adopted a quantitative research approach to measure the relationships among variables and the extent to which they influence one another.

Majid et al. (2017) mention that research design can further be broken down into five categories, namely descriptive, experimental, correlational, diagnostic, and explanatory research. Descriptive research is a study of status and is widely used in education, nutrition, epidemiology, and behavioural sciences. It is based on the premise that problems can be solved and practices improved through observation, analysis, and description. Experimental research is conducted with a scientific approach using two sets of variables. The first set acts as a constant, which is used to measure the differences in the second set. Correlational research design investigates relationships between two (or more) variables without the researcher controlling or manipulating any of them. Diagnostic research focuses on estimating the sensitivity and specificity of an individual diagnostic test, predictive values, and other parameters of interest. Explanatory research is a research method that explores why something occurs when limited information is available (Majid et al., 2017). This research adopted a correlational research approach because it seeks to investigate relationships between variables.

Research methods are specific procedures for collecting and analysing data. Developing research methods is an integral part of research design (Teegavarapu et al., 2008). According to Majid et al. (2017), when planning methods, there are two key decisions to consider. Firstly,

the researcher must decide how to collect data. The selected methods depend on what type of data are needed to answer the research question(s). Secondly, the researcher must decide how to analyse the data. The methods for collecting data include experiments, surveys, interviews or focus groups, observation, literature review, and case studies. Surveys are research methods used to collect data from a predefined group of respondents to gain information about and insights into various topics of interest (Teegavarapu et al., 2008). They can have multiple purposes, and researchers can conduct them in many ways depending on the chosen methodology and the goal of the study. Majid et al. (2017) define interviews as a qualitative research method that relies on asking questions in order to collect data. Observations are a way to gather data by watching people or events or noting physical characteristics in their natural setting. A literature review includes a critical evaluation of the material. Teegavarapu et al. (2008) refer to a case study as a research approach that is used to generate an in-depth, multifaceted understanding of a complex issue in its real-life context. In this study, a survey research design with the use of a questionnaire was used and administered at one point in time within the normal environment of students at the national military university with no interference from the researcher.

Payne and Payne (2004) point out that both cross-sectional and longitudinal studies are observational studies. Payne and Payne (2004) refer to longitudinal studies as studies where researchers repeatedly examine the same individuals to detect any changes that might occur over a period of time. Longitudinal studies are a type of correlational research in which researchers observe and collect data on a number of variables without attempting to influence those variables. A cross-sectional study involves different groups of people who do not share the same variable(s) of interest, but who do share other relevant variables (Payne & Payne, 2004). The defining feature of a cross-sectional study is that it can compare different population groups at a single point in time. The benefit of a cross-sectional study design is that it allows researchers to compare many different variables at the same time (Payne & Payne, 2004). The benefit of a longitudinal study is that researchers are able to detect developments or changes in the characteristics of the target population at both the group and individual level. This study made use of a cross-sectional study whereby data were collected at a single point in time.

3.2.2   Target population and sample

Teegavarapu et al. (2008) define a research population as a set of people or objects known to possess similar characteristics. Asiamah et al. (2017) are of the view that it is important to define the population because it guides others in appraising the credibility of the sample and sampling technique. These authors are of the view that it is not always appropriate or feasible to recruit the whole population of interest in research studies. The authors thus suggest that researchers should only recruit a subsection of the population of interest. The findings are going to be generalised to the whole population.

In a research protocol it is important to explain the demographic characteristics of the population of interest, which include their age, ethnicity, socio-economic status, education level, legal status, and work status (Majid et al., 2017). Exclusion criteria refer to characteristics that will interfere with data collection, follow-up, and the safety of the research participants (Payne & Payne, 2004). Majid et al. (2017) are of the view that if a participant meets the exclusion criteria, he/she should not be considered for the sample.

The population of interest for this study were the students at the Faculty of Military Science at Stellenbosch University. Individuals from this population share several comparable characteristics. These individuals are on an equivalent level of education and, most significantly, they are all members of the military. The population includes soldiers from different arms of service from different regions in South Africa.

Babbie (2013) defines a sample as a smaller set of data that a researcher chooses or selects from a larger population by using a predefined selection method. These elements are known as sample points, sampling units, or observations. Creating a sample is an efficient method of conducting research. In most cases, it is impossible or costly and time-consuming to research the whole population. Examining the sample therefore provides insights that the researcher can apply to the entire population. The sample of this study consisted of all the undergraduate residential students at the national military university. This is because the target population was reasonably small, and it was possible to collect data from the whole population.

3.2.3   Sampling technique and sample size

According to Babbie (2013), there are two major types of sampling, namely probability and non-probability sampling. Probability sampling is a technique whereby the researcher chooses samples from a larger population using a method based on probability theory. For a participant to be considered for a probability sample, he/she must be selected using a random selection. Babbie (2013) defines non-probability sampling as a sampling technique whereby the researcher selects samples based on the subjective judgement of the researcher rather than random selection. It is a less stringent method and depends heavily on the expertise of the researcher. It is carried out by observation, and researchers use it widely for qualitative research.

According to Gill (2020), there are four commonly used types of probability sampling designs, namely simple random sampling, stratified sampling, systematic sampling, and cluster sampling, which are reviewed according to this author here. Simple random sampling gathers a random selection sample from the entire population, where each unit has an equal chance of selection. Stratified sampling involves a random selection of a sample from within certain strata, or subgroups within the population. Each subgroup is separated from the others based on a common characteristic, such as gender, race, or religion. This way, one can ensure that all subgroups of a given population are adequately represented within a sample population. Gill (2020) further mentions that systematic sampling draws a random sample from the target population by selecting units at regular intervals, starting from a random point. Obviously, this method is useful in situations where records of a target population already exist. Cluster sampling is the process of dividing the target population into groups, called clusters. A randomly selected subsection of these groups then forms the sample. Cluster sampling is an efficient approach when the researcher wants to study large, geographically dispersed populations.

Babbie (2013) identifies five types of non-probability sampling methods. These are convenience sampling, consecutive sampling, quota sampling, judgemental or purposive sampling, and snowball sampling. Babbie (2013) defines convenience sampling as a non-probability sampling technique where samples are selected from the population only because they are conveniently available to the researcher. Researchers choose these samples because they are easy to recruit, and the researcher did not consider selecting a sample that

represents the entire population. Babbie (2013) is of the view that consecutive sampling is very similar to convenience sampling, with a slight variation. Here, the researcher picks a single person or a group of a sample, conducts research over a period, analyses the results, and then moves on to another subject or group if necessary. Quota sampling is a method used when the researcher is interested in particular strata within the population. Quota sampling will help in dividing the population into strata or groups. Gill (2020) defines judgemental or purposive sampling as a method where the researcher selects the samples based purely on the researcher's knowledge and credibility. In other words, the researcher chooses only those he/she deems fit to participate in the research study. Snowball sampling helps researchers find a sample when they are difficult to locate. Researchers use this technique when the sample size is small and not easily available. This sampling system works like the referral programme. Once the researcher finds suitable subjects, they ask them for assistance to seek similar subjects to form a sample of a considerably good size (Gill, 2020). A non-probability convenience sampling technique was used for data collection. The decision for this approach is based on the fact that students from the Faculty of Military Science have different time schedules and classes. The researcher did not wish to inconvenience or interfere with the schedule of the students or the activities of the university. The students were therefore requested to participate in the study depending on their availability as communicated to them via the channels of command. One of the disadvantages of convenience sampling is that subjects in a convenience sample might not be representative of the population that the researcher wishes to study (Babbie, 2013).

As suggested earlier by Majid et al. (2017), it is not often appropriate or feasible to recruit an entire population for research. The population is often large, and it is not possible to study every one of the populations. The population size of the students at the national military university is approximately 270. The Raosoft Sample Size Calculator (2004) was used to determine the sample size that should be included in the study to enable generalisation of the findings. The Raosoft Sample Size Calculator recommended a minimum of 159 participants for the study with a margin of error of 5% and a confidence level of 95%. The margin of error is the amount of error that the researcher can tolerate, and the confidence level is the amount of certainty the researcher can tolerate. For this study, the whole population was included in the study and given a chance to participate in the study since the

population is relatively small, as well as to comply with the requirements of SEM, which requires a minimum of 200 participants (Diamantopoulos & Siguaw, 2000).

3.2.4 Characteristics of the sample

The target population for this study consisted of undergraduate students from a South African military university. These were first-, second-, and third-year residential students who were busy with their studies towards a degree. As alluded to earlier, for this study the whole population was included in the sample since it is relatively small and therefore possible to collect data from all the students. The sample characteristics are presented in Table 3.1 and are discussed in the next section.

SEM is the primary data-analysis technique that was used in this study. SEM analysis requires a large sample to achieve sufficient statistical power so that meaningful results and accurate parameter estimates are obtained (Quintana & Maxwell, 1999). With regard to an acceptable number of subjects, Weston and Gore (2006) recommend a minimum of at least 200 subjects for any SEM analysis. This study met this requirement by obtaining a final sample of 212 participants.

Table 3.1

Sample demographics

Variable		Frequency (N)	Percentage (%)
Gender			
	Females	64	30
	Males	148	70
	Total	212	100
Age			
	18-30	171	81
	31-40	41	19
	Total	212	100
Race			
	African	179	84
	Coloured	16	8
	White	12	6
	Asian	5	2
Total		212	100

A total of 212 residential undergraduate students from a South African military university participated in the study. The sample was representative of all arms of service within the military (Army, Air Force, Navy, Military Health Service, and Defence Intelligence). The majority (70%) of the participants were male, while female participants made up 30% of the sample. The majority (81%) of the respondents fell in the 18- to 30-year-old category, and 19% of respondents fell in the age category 31 to 40. Regarding race, the majority (84%) of the sample were black Africans, followed by coloured people at 8%, white people accounted for 6%, and Asian people for 2%.

3.2.5   Research instruments

The questionnaire contained three sections, namely the consent form in Section A, a biographic assessment in Section B, followed by instruments for measuring the constructs of the study in Section C.

3.2.5.1   The Big Five Inventory (BFI)

The first scale was the BFI, which consisted of 44 items (John & Srivastava, 1999). This instrument was adopted because it is brief and easy to understand by the respondents. For the purposes of this study, only scales on Conscientiousness, Openness to Experience, and Neuroticism were of interest from the BFI. Alansari (2016) reported Cronbach's Alphas of .83 for Conscientiousness among males, .74 for females; .82 for Openness to Experience among males, .83 for females; .79 for Neuroticism among males, .85 for females. An example item of the Conscientiousness scale is "I work according to a plan". An example item of the Openness to Experience scale is "I am original and come up with new ideas". An example item of the Neuroticism scale is "I am depressed". A five-point Likert scale was used, where 1 (strongly disagree), 2 (slightly disagree), 3 (neutral), 4 (slightly agree), and 5 (strongly agree).

3.2.5.2   The Selflessness scale

A 15-item Selflessness scale (Dambrun, 2017) was included in Section C. The participants were asked the degree to which they agree on the four-point Likert scale, starting with 1 (highly disagree), 2 (disagree), 3 (agree), and 4 (highly agree). The internal accuracy of the Cronbach's alpha coefficient was 0.61 reported in a study by Bachar et al. (2009) that investigated the life-and-death attraction of disordered patients. An example item is "I am willing to sacrifice a lot for the benefit of others".

3.2.5.3 Norwegian Professional Identity Scale (NPIS)

The last questionnaire that was used in Section C was a 33-item NPIS with three dimensions of Individualism, Idealism, and Professionalism developed by Johansen et al. (2013) to measure Military Identity. The NPIS is of Norwegian origin and was adapted for the purposes of this study. The aspects that was adapted is the linguistics as well as aspects on cultural differences. These aspects were put in contexts so that it can be better understood by South-African participants. It uses a seven-point Likert scale, starting with 1 (totally disagree), 2 (disagree), 3 (somewhat disagree), 4 (neutral), 5 (somewhat agree), 6 (agree), to 7 (totally agree). Internal accuracy was identified as suitable (α = .60-.83) during an analysis by Johansen et al. (2013). An example item is "I look upon work in the Armed Forces as a calling where I can serve my country".

3.3   PROCEDURE OF DATA COLLECTION

According to Babbie (2013), survey research is used to answer questions, solve problems that have been posed or observed, assess needs and set goals, determine whether or not specific objectives have been met, establish baselines against which future comparisons can be made, analyse trends over time, and describe what exists, in what amount, and in what context. Kreamer (1991) defines three distinct features of survey research. Firstly, survey research is utilised to quantify specific aspects of a given population. These aspects often entail investigating the connections between variables. Secondly, the data necessary for survey research are gathered from humans and are thus subjective. Finally, survey research employs a subset of the population from which the findings may be generalised to the entire population. Independent and dependent variables are used to define the scope of study in survey research, although they cannot be explicitly controlled by the researcher. The researcher must first develop a model that identifies the predicted correlations between these factors before performing the survey. The survey is then developed to put this concept to the test against observations of the phenomenon.

A survey is a data-gathering tool that contains a set of structured questions to which participants provide responses based on their knowledge and experience. A survey, according to Pinsonneault and Kraemer (1993), is a method of acquiring information on the qualities, behaviours, or views of a large group of individuals. Surveys can also be used to assess needs, evaluate demand, and investigate impact. The term "survey instrument" is frequently used

to differentiate between the survey tool and the survey study that it is supposed to assist. According to Kreamer (1991), surveys may collect information from huge samples of the population. They are also well suited for collecting demographic data that describe the sample's composition. Surveys are flexible in terms of the types and number of variables that may be researched, require little capital to construct and conduct, and are normally simple to generalise. Surveys can also elicit information about attitudes that would be difficult to measure otherwise using observational approaches.

This study made use of a survey to collect data. Students were invited via their channel of command to participate in this study. Potential participants were gathered in the hall. The questionnaires were handed out and the procedure was explained. The students were informed that participation was voluntary, and the ethical considerations were outlined. Those who wished to continue, completed the questionnaires and returned it to the researcher.

3.4   STATISTICAL ANALYSIS OF DATA

The Statistical Package for the Social Sciences (SPSS), version 27 was used to compute descriptive statistics, item analysis for testing reliability, and dimensionality analysis to ascertain if the measures that were presented as unidimensional were indeed unidimensional. SPSS was used to test the moderation effects through linear regression analysis of the interaction effects of the independent and moderating variables to substantiate or reject Hypotheses 4, 5, and 6.

According to Schumacker and Lomax (2010), SEM uses various types of models to depict relationships among observed variables, with the same basic goals of a theoretical model hypothesised by research. More specifically, various theoretical models can be tested in SEM that hypothesise how sets of variables define constructs and how these constructs are related to one another. These authors indicate that the goal of SEM analysis is to determine the extent to which the theoretical model is supported by sample data. If the sample data support the theoretical model, then either the original model can be modified and tested, or other theoretical models need to be developed and tested. Consequently, SEM tests theoretical models using the scientific method of hypothesis testing to advance our understanding of complex relationships among constructs.

3.5   STRUCTURAL EQUATION MODELLING (SEM)

According to Stein et al. (2012), a simple and accurate definition of SEM is difficult to find. Kaplan (2008, p. 1) proposes that SEM "can perhaps best be defined as a class of methodologies that seek to represent hypotheses about the means, variances and covariances of observed data in terms of a smaller number of 'structural' parameters defined by a hypothesised underlying model". According to Stein et al. (2012), SEM is a powerful, multivariate technique used increasingly in scientific investigations to test and evaluate multivariate causal relationships. SEM differs from other modelling approaches as it tests the direct and indirect effects on pre-assumed causal relationships. SEM is a nearly 100-year-old statistical method that has progressed over three generations. The first generation of SEM developed the logic of causal modelling using path analysis. SEM was then transformed by the social sciences to include factor analysis. By its second generation, SEM expanded its capacity. The third generation of SEM began in 2000 with Judea Pearl's development of the "structural causal model" (Stein et al., 2012).

According to Stein et al. (2012), SEM comprises two sub-models. Firstly, the measurement model estimates relationships between the observed variables (also referred to as indicators) and latent variables. Secondly, the structural model develops the relationships between the latent variables. SEM enables the analysis of latent variables and their relationships, which offers the opportunity to analyse the dependencies of psychological constructs without measurement errors.

The Linear Structural Relationships (LISREL), which was developed in 1970 by Karl Gustav Jöreskog and Dag Sörbom, was utilised to conduct SEM. Since LISREL's development, it has been recognised as one of the best solutions for the estimation of structural equation models for covariance matrices (Stein et al., 2012).

Hoyle (2004) refers to CFA as a statistical procedure for testing hypotheses about the commonality among variables. As a multivariate procedure, CFA is used to simultaneously test multiple hypotheses that collectively constitute a measurement model. CFA for each scale was performed to test its validity and to test the extent to which the measurement and the structural models fit the data.

Hoyle (2004) describes the measurement model as a sub-model in SEM that specifies the indicators for each construct and assesses the reliability of each construct to estimate causal relationships. Hoyle (2004) is of the view that performing SEM on the measurement model has the intention of determining the validity of the overall model, while the structural model aims to test the hypotheses of the study. According to Schumacker and Lomax (2010), the structural model shows the causal and correlational links among latent variables in a theoretical model. The following steps outlined by Schumacker and Lomax (2010) were followed for SEM in this study:

- The process of utilising all the available theory, research, and information to develop a theoretical model is known as model specification (Schumacker & Lomax, 2010). At this level, a researcher's goal is to create a theoretically grounded, scientifically sound model that can be verified using variance-covariance data. In order to decide which constructs or variables to include or exclude in the model, as well as the parameters and nature of the relationships between the variables, theory is used. Additionally, creating and generating an implied theoretical model is a part of model specification. The closest estimation or fit between the implied theoretical model and the sample covariance, or, to put it another way, the implied sample covariance should be appropriately reproduced by the implied theoretical model, indicates that the model has been properly specified (Schumacker & Lomax, 2010).

- An applied researcher's primary goal is to prevent model misspecification, which leads to specification error, which is obvious when the actual model that produced the data deviates from the inferred theoretical model (Schumacker & Lomax, 2010). Poor estimation and model fit result from model misspecification and specification errors. On a different level, Schumacker and Lomax (2010) define model specification as a stage that involves translating the interrelations between the study's variables that are hypothesised and based on theory into mathematical and statistical equations. Structural equation models typically consist of two components: the structural model and the measurement model. Both of these models were specified according to the same guiding concepts.

- Model identification is the extent to which the information provided by the data is sufficient to enable parameter estimation (Reisinger & Turner, 1999). Two significant

implications flow from this definition of model identification. Firstly, without model or parameter estimation, model identification cannot continue. Parameter estimation cannot proceed without model identification (Schumacker & Lomax, 2010). Determining whether there is enough information to move on to the next stage of model estimates is the second goal of model identification.

- In order to solve the identification problem (Schumacker & Lomax, 2010), a researcher must ascertain whether it is possible to derive unique parameter estimates from the sample data contained in the sample variance-covariance S and the theoretical model suggested by the population variance-covariance matrix. Degrees of freedom are the differences between the sample variance-covariance matrix's number of different values and the number of unconstrained parameters that need to be estimated (Schumacker & Lomax, 2010).

- Model testing is the process of assessing how well the data fit the model (Schumacker & Lomax, 2010). Model testing is the process of evaluating how well the observed data support the theoretical model. This step involves evaluating the derived model's plausibility or robustness in light of the available data. Three different methods of model fit testing, namely absolute fit measures, incremental fit measures, and parsimonious fit measures are described by Reisinger and Turner (1999). Absolute fit measurements evaluate a model's overall fit while concentrating on both its structural and measurement components. These broad metrics are referred to as global model testing by Schumacker and Lomax (2010).

- The goal of evaluating a model's overall fit, according to Diamantopoulos and Siguaw (2000), is to establish how well the model as a whole fits the available empirical data. The model's overall fit is summarised by overall fit measurements. The chi-square statistic, the Goodness of Fit Index (GFI), the root mean square residuals (RMSR), the root mean square error of approximation (RMSEA), the non-centrality parameter (NCP), the scaled non-centrality parameter (SNCP), and the Expected Cross-Validation Index (ECVI) are used to evaluate the overall model fit. There are distinct acceptable thresholds for each of these overall fit metrics. Diamantopoulos and Siguaw (2000) outline fit indices and their acceptable thresholds: RMSEA < .80, RMSR .05, GFI > .90, Normed Fit Index (NFI) > .90, Non-Normed Fit Index (NNFI) > .90, Comparative Fit Index (CFI) > .90, Incremental Fit Index (IFI) > .90, and Relative Fit Index (RFI) > .90.

- To improve fit, a model that does not fit well should be modified. Although it is uncommon, Diamantopoulos and Siguaw (2000) believe that it is possible to tweak a well-fitting model in order to make it even better. Model modification is the process of respecifying a model by removing insignificant factors and/or adding relevant parameters to increase the model's fit. Testing the changed model with new data should be done with caution (Diamantopoulos & Siguaw, 2000). Model testing is followed by model modification, which has the main goal of enhancing model fit. Hox and Bechger (1998) contend that it is best to only perform model modification when there is theoretical basis for doing so in order to avoid the risk of exploiting random sample characteristics. Theoretically justified model modifications should be made; illogical additions and deletions should be avoided. Furthermore, it is crucial to understand that when a model is modified, the analysis changes from being confirmatory to being exploratory (Reisinger & Turner, 1999). A new model created by respecification is provisional and may require cross-validation using a fresh sample (Schumacker & Lomax, 2010).

3.6   ETHICAL CONSIDERATIONS

Prior authorisation had to be obtained from the relevant authorities in the military organisation before the commencement of the study, since it took place within the military. The first authority was the Officer Commanding of the South African military university, by means of a formal written letter. After obtaining approval from the Officer Commanding, the Chief of Defence Intelligence was approached with a formal written letter to request permission to engage unit members to participate in the study. Permission was obtained from the Chief of Defence Intelligence. Having obtained these authorisations, unit members were then approached to participate in the study. This research was conducted according to the guidelines of Stellenbosch University. The research strictly adhered to confidentiality requirements and research ethical standards. All the ethical requirements stipulated by the Stellenbosch University Ethics Committee and the Health Professions Council of South Africa (HPCSA) were strictly adhered to. The principle of honour for human self-respect and generosity was maintained during data collection.

Brood (2006) indicated that informed consent entails providing the subjects with information about the purpose of the study, how the data will be used, what participation will be required of them, the contact details of the researcher and the supervisor(s) for additional information, the time required of them, and their right to withdraw their consent at any time they wish to do so. Broom (2006) stresses that gaining informed consent is the most important aspect of ethical considerations in research. The informed consent letter for this research was compiled based on the guidelines and requirements of Stellenbosch University. This study was officially confirmed to have minimal risks, if any at all, for the participants by the Research Ethics Committee of Stellenbosch University.

Babbie (2013) indicated that in order to observe confidentiality, the participants' information will not be disclosed without their informed consent. The researcher ensured that all collected data are protected from being known to other people by keeping it safe in a Microsoft OneDrive account with the login details known only by the researcher. To observe the guidelines of informed consent, the purpose of the study was explained to the participants prior to their participation, together with the issues surrounding the anonymity and confidentiality of their participation, as well as the voluntary nature of their participation. The participants had a full understanding of the topic, aim, problem statement, and significance of the study. Each participant signed the consent form before completing the questionnaire. To observe voluntary participation, the participants in the study were informed that their participation was not compulsory and that they were allowed to withdraw from participation at any time if they wished to do so. No compensation or rewards were offered or given to the participants in exchange for completing the study. No harm was inflicted upon any participant.

3.7   CHAPTER SUMMARY

This chapter explained the research methodology used to collect and analyse the data required to answer the research questions and to test the hypothesised relationships developed in this study. The chapter began with discussion of the research design, followed by the population from which data were collected and the method used in sample selection. The chapter continued with explanations of the questionnaire design and the study's data-

collection methods. The next chapter presents the results that emerged from the analysis of the collected data.

CHAPTER 4

RESEARCH RESULTS

4.1   INTRODUCTION

This chapter presents the results of the data analysis. An in-depth study of the available literature resulted in the formulation and specification of hypotheses that need to be tested. The structural model (see Figure 4.1) hypothesises the relationships between specific latent variables, and the nature of the relationships between these variables and how they influence Military Identity are presented in this chapter. Item parcels derived from random parcelling of unidimensional scales and subscales were calculated in SPSS version 27 (2020). These item parcels were used to operationalise the measurement and structural models to test the hypothesised relationships. The operationalisation of the measurement and structural models assumed that the items in each item parcel would reflect only the underlying dimension that it intended to measure. From these defined structural and measurement relationships, the statistical hypotheses were formulated.

Two overarching statistical hypotheses were formulated on overall measurement and structural model fit. The results of the statistical analysis that aimed to test these stated hypotheses are presented in this chapter. The chapter commences with a discussion of the treatment of the missing values, which is followed by discussions of the results of item and dimensional analyses, the test of multivariate normality for the measurement model, the evaluation of the measurement and structural models, and the hypothesised relationships among the latent variables.

It is worth mentioning that preliminary data analysis was performed before conducting major data analyses. For example, after entering/capturing the collected data on an SPSS spreadsheet, reversing negatively worded items, which implies that the numerical scoring scale runs in the opposite direction, was performed. Computing descriptives was also performed in order to identify items with incorrect values, given that the scales ranged between 1 and 5, 1 and 4, and 1 and 7.

4.2   MISSING VALUES

Byrne (2001) maintains that the pervasive problem of missing scores in SEM is increasingly recognised as a critical issue because of its potential to introduce bias in modelling analysis and conclusions. The missing values problem is more prevalent in social scientific studies where self-reports are utilised to collect data that are either introduced deliberately as respondents avoid certain items or miss items unintentionally. The intention of addressing the problem of missing values is to include as many cases as possible, preferably all, in the analysis. In this study, this problem of missing values was addressed through multiple imputation (Jöreskog & Sörbom, 2006). The multiple imputation procedures available in LISREL 8.80 assume that the values are missing at random and that the observed variables are continuous and follow a multivariate normal distribution (Du Toit & Du Toit, 2001). Furthermore, Mels (2010) suggests that multiple imputation may be used even when the conditional assumptions are not met. If the observed variables are measured on a scale comprising five or more scale values, the observed variables may not be excessively skewed (even though the null hypothesis of multivariate normality has been rejected) and less than 30% of the data constitute missing values. The latter assumptions were met in this study. Missing values are substituted with values derived from averages via simulation (Jöreskog & Sörbom, 2006).

Listwise deletion was used to handle incomplete data in this study. Schafer and Graham (2002) defined listwise deletion as the default way of handling incomplete data in many statistical packages, including SPSS. The procedure eliminates all cases with one or more missing values on the analysis variables. An important advantage of listwise deletion is convenience. If the data are Missing Completely at Random (MCAR), listwise deletion produces unbiased estimates of means, variances and regression weights. Under MCAR, listwise deletion produces standard errors and significance levels that are correct for the reduced subset of data, but that are often larger relative to all available data.

4.3   ITEM ANALYSIS

Item analysis using the SPSS version 27 (IBM, 2020) and reliability analysis were performed on the items of the scales used to measure the latent variables under study. The purpose of conducting item analysis was to identify and eliminate items that do not contribute to the

internal consistency of the latent variables measured by these scales. The results for each scale are presented here.

4.3.1 Item analysis of the Conscientiousness subscale

A nine-item unidimensional Conscientiousness subscale of the BFI developed by John and Srivastava (1999) was used to measure Conscientiousness. A Cronbach's alpha of α = .820 was obtained for the Conscientiousness subscale, which is regarded as good (Gliem & Gliem, 2003; Pallant, 2016). The corrected Item-Total Correlation values indicative of the extent to which each item correlates with the total score is demonstrated in the item-total statistics; values below .30 are regarded as low, which indicates that the item could be measuring a different construct and the item may warrant deletion (Pallant, 2016). As indicated in Table 4.1, all the corrected Item-Total Correlations were larger than .30, with values ranging from .459 to .658, which depicts that they were all measuring the same construct. None of the items would result in an increase in alpha if deleted and all the items were therefore retained. The mean inter-item correlation is 33.665. This suggests high correlations that depict definite relationships, which indicates substantial relationships among the items.

Table 4.1

Reliability analysis output for the Conscientiousness subscale

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.820	.821	9

Inter-item correlation matrix								
	BFI3	BFI8R	BFI13	BFI18R	BFI23R	BFI28	BFI33	BFI38	BFI43R
BFI3	1.000	.281	.467	.411	.285	.390	.388	.219	.267
BFI8R	.281	1.000	.221	.541	.442	.259	.277	.250	.338
BFI13	.467	.221	1.000	.356	.328	.342	.392	.397	.233
BFI18R	.411	.541	.356	1.000	.511	.326	.386	.281	.485
BFI23R	.285	.442	.328	.511	1.000	.240	.261	.388	.496

BFI28	.390	.259	.342	.326	.240	1.000	.297	.399	.193
BFI33	.388	.277	.392	.386	.261	.297	1.000	.341	.212
BFI38	.219	.250	.397	.281	.388	.399	.341	1.000	.263
BFI43R	.267	.338	.233	.485	.496	.193	.212	.263	1.000

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
BFI3	29.7264	36.816	.515	.351	.802
BFI8R	30.1840	35.734	.507	.339	.803
BFI13	29.5708	36.749	.518	.348	.802
BFI18R	30.0708	34.294	.658	.493	.784
BFI23R	30.1745	34.458	.585	.415	.793
BFI28	29.7406	36.970	.459	.277	.809
BFI33	29.5189	38.298	.483	.280	.807
BFI38	29.8821	36.977	.483	.320	.806
BFI43R	30.4528	35.472	.485	.324	.807

Scale statistics

Mean	Variance	SD	N of items
33.6651	44.802	6.69343	9

4.3.2 Item analysis of the Openness to Experience subscale

A 10-item unidimensional Openness to Experience subscale of the BFI was used to measure this construct. An internal consistency reliability Cronbach's alpha coefficient of α = .616 was obtained for the Openness to Experience subscale, which is considered as usable (Gliem & Gliem, 2003; Pallant, 2016). Item BFI41R had a corrected Item-Total Correlation of r = -.169, which is less than an acceptable threshold of .30 (Pallant, 2016). The Item-Total statistics indicated that the Cronbach's alpha would increase to α = .696 if this item was deleted. This item was therefore deleted. Item BFI35R also had a corrected Item-Total Correlation of r = .038, which is less than the acceptable threshold. The item-total statistics indicated that

the Cronbach's alpha would increase to α = .738 if this item was deleted. This item was systematically removed after deleting item BF141R. The mean inter-item correlation obtained after deleting these two items was 30.31, with corrected Item-Total Correlation values ranging from .220 to .524, which suggested slight to marked relationships among the Openness to Experience items. Item BF144 with a corrected Item-Total Correlation value of .220 was flagged. After deleting items BF141R and BF135R, none of the items would result in an increase in alpha if deleted.

Table 4.2

Reliability analysis output for the Openness to Experience subscale

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.738	.744	8

Inter-item correlation matrix								
	BFI5	BFI10	BFI15	BFI20	BFI25	BFI30	BFI40	BFI44
BFI5	1.000	.360	.316	.360	.379	.330	.289	.122
BFI10	.360	1.000	.316	.268	.234	.234	.253	.070
BFI15	.316	.316	1.000	.448	.277	.229	.237	.028
BFI20	.360	.268	.448	1.000	.320	.343	.325	.059
BFI25	.379	.234	.277	.320	1.000	.307	.241	.084
BFI30	.330	.234	.229	.343	.307	1.000	.435	.298
BFI40	.289	.253	.237	.325	.241	.435	1.000	.309
BFI44	.122	.070	.028	.059	.084	.298	.309	1.000

Item-total statistics				
	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
BFI5	26.42	19.220	.508	.289	.696
BFI10	26.45	20.125	.397	.197	.717
BFI15	26.31	20.337	.425	.264	.712

BFI20	26.38	19.356	.494	.317	.699
BFI25	26.69	20.071	.426	.216	.712
BFI30	26.58	18.926	.524	.305	.692
BFI40	26.43	19.299	.503	.285	.697
BFI44	26.88	20.929	.220	.139	.758

Scale statistics

Mean	Variance	SD	N of items
30.31	24.906	4.991	8

4.3.3   Item analysis of the Neuroticism subscale

An eight-item unidimensional Neuroticism subscale of the BFI was used to measure the Neuroticism construct. As indicated in Table 4.3, an internal consistency reliability Cronbach's alpha coefficient of $\alpha = .771$ was obtained for the Neuroticism subscale, which is considered acceptable (Gliem & Gliem, 2003; Pallant, 2016). As indicated in Table 4.3, all the corrected Item-Total Correlations were larger than .30, with values ranging from .377 to .582, which depicts that they were all measuring the same construct. None of the items would result in an increase in alpha if deleted. The mean Inter-Item Correlation is 20.221, which suggests acceptable and marked relationships among the Neuroticism items.

Table 4.3

Reliability analysis output for the Neuroticism subscale

Reliability statistics

Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.771	.773	8

Inter-item correlation matrix

	BFI4	BFI9R	BFI14	BFI19	BFI24R	BFI29	BFI34R	BFI39
BFI4	1.000	.035	.294	.342	.290	.255	.216	.239

BFI9R	.035	1.000	.208	.311	.383	.226	.399	.221
BFI14	.294	.208	1.000	.354	.245	.386	.258	.264
BFI19	.342	.311	.354	1.000	.337	.434	.359	.369
BFI24R	.290	.383	.245	.337	1.000	.237	.519	.257
BFI29	.255	.226	.386	.434	.237	1.000	.257	.406
BFI34R	.216	.399	.258	.359	.519	.257	1.000	.257
BFI39	.239	.221	.264	.369	.257	.406	.257	1.000

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
BFI4	18.0660	27.560	.377	.210	.763
BFI9R	17.9387	28.541	.387	.252	.760
BFI14	17.3962	26.980	.458	.231	.749
BFI19	17.2123	25.211	.582	.347	.726
BFI24R	17.9717	26.900	.504	.352	.741
BFI29	17.4906	25.891	.510	.307	.739
BFI34R	18.1274	27.733	.508	.348	.742
BFI39	17.3491	26.209	.459	.235	.749

Scale statistics

Mean	Variance	SD	N of items
20.2217	33.993	5.83037	8

4.3.4 Item analysis of the Selflessness scale

A 15-item unidimensional Selflessness scale was used to measure this construct. After including all the items in the analysis, an initial poor reliability Cronbach's alpha coefficient of $\alpha = .575$ was obtained for the Selflessness scale. Item SS6R had a corrected Item-Total Correlation of $r = -.273$, which is less than the acceptable threshold of .30 and an unacceptable negative sign (Pallant, 2016). The corrected Item-Total Correlation indicated that the Cronbach's alpha would increase to $\alpha = .643$ if this item was deleted. After deleting this item,

the Cronbach's alpha was still not satisfactory and therefore, upon further inspection of the output, it was decided to delete Item SS8R, which had a corrected Item-Total Correlation of r = -.229, which is less than the acceptable threshold, also with a negative sign. The corrected Item-Total Correlation indicated that the Cronbach's alpha would increase to α = .703 if this item was deleted. Further systematic deletion of item SS14R was also required, which also had a compromised corrected Item-Total Correlation of r = -.203, which is less than the acceptable threshold; with the Item-Total statistics indicating that the Cronbach's alpha would increase to α = .757 if this item was deleted. As indicated in Table 4.4, an internal consistency reliability Cronbach's alpha coefficient of α = .757 was obtained for the Selflessness scale, which is acceptable (Gliem & Gliem, 2003; Pallant, 2016).

After deleting three compromised items, namely SS6R, SS8R, and SSR14R, as indicated in Table 4.4, only one of the corrected Item-Total Correlations was less than .30, with values ranging from .290 to .525. None of the items would result in an increase in alpha if deleted. The mean Inter-Item Correlation is 32.08, which suggests slight, almost negligible, to acceptable and marked relationships among the Selflessness scale items.

Table 4.4

The reliability analysis output for the Selflessness scale

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.757	.759	12

Inter-item correlation matrix											
	SS1	SS2	SS3	SS4	SS5	SS7	SS9	SS10	SS11	SS12	SS13	SS15
SS1	1.000	.527	.379	.369	.052	.288	.091	.128	.138	.088	.100	.247
SS2	.527	1.000	.370	.334	.020	.183	.085	.067	.200	.083	.153	.168
SS3	.379	.370	1.000	.289	.289	.417	.130	.095	.075	.193	.091	.204
SS4	.369	.334	.289	1.000	.148	.240	.143	.217	.422	.164	.236	.208
SS5	.052	.020	.289	.148	1.000	.514	.185	.303	-.070	.386	.103	.267
SS7	.288	.183	.417	.240	.514	1.000	.200	.278	.050	.308	.162	.276

SS9	.091	.085	.130	.143	.185	.200	1.000	.442	.243	.162	.249	.192
SS10	.128	.067	.095	.217	.303	.278	.442	1.000	.273	.105	.185	.196
SS11	.138	.200	.075	.422	-.070	.050	.243	.273	1.000	.091	.303	.105
SS12	.088	.083	.193	.164	.386	.308	.162	.105	.091	1.000	.069	.277
SS13	.100	.153	.091	.236	.103	.162	.249	.185	.303	.069	1.000	.239
SS15	.247	.168	.204	.208	.267	.276	.192	.196	.105	.277	.239	1.000

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
SS1	29.19	23.234	.407	.384	.739
SS2	29.12	23.887	.369	.341	.743
SS3	29.51	23.398	.447	.312	.735
SS4	28.91	23.409	.473	.331	.732
SS5	29.88	22.734	.385	.407	.743
SS7	29.68	22.342	.525	.396	.724
SS9	29.42	23.922	.355	.250	.745
SS10	29.37	24.139	.394	.311	.741
SS11	29.04	24.672	.290	.308	.751
SS12	29.75	23.703	.343	.214	.747
SS13	29.47	24.345	.315	.175	.749
SS15	29.59	22.650	.416	.201	.738

Scale statistics

Mean	Variance	SD	N of items
32.08	27.405	5.235	12

4.3.5   Item analysis of the Idealism subscale

An 11-item unidimensional Idealism subscale of the NPIS was used to measure this construct. The Cronbach's alpha observed for this scale was .692, which is deemed not satisfactory but usable (Pallant, 2016). As indicated in Table 4.5, some of the corrected Item-Total Correlations

were less than .30, with values ranging from .192 to .519, which depicts that they were all measuring the same construct. If items NPIS(I)5 and NPIS(I)11 were deleted, the alpha level will increase to .696. It was decided to retain these items. The mean Inter-Item Correlation is 62.46, which suggests acceptable and marked relationships among the Idealism items.

Table 4.5

The reliability analysis output for the Idealism subscale

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.692	.699	11

Inter-item correlation matrix											
	NPIS(I)1	NPIS(I)2	NPIS (I)3	NPIS(I)4	NPIS(I)5	NPIS(I)6	NPIS(I)7	NPIS(I)8	NPIS(I)9	NPIS(I)10	NPIS(I)11
NPIS(I)1	1.000	.291	.226	.005	.005	.330	.296	.321	.082	.400	-.055
NPIS(I)2	.291	1.000	.326	.224	.203	.281	.130	.170	.105	.167	.125
NPIS (I)3	.226	.326	1.000	.337	.090	.171	.225	.103	.130	.192	.108
NPIS(I)4	.005	.224	.337	1.000	.282	.073	.164	.026	.184	-.094	.219
NPIS(I)5	.005	.203	.090	.282	1.000	.028	.179	-.032	.207	-.245	.231
NPIS(I)6	.330	.281	.171	.073	.028	1.000	.492	.573	.060	.374	-.101
NPIS(I)7	.296	.130	.225	.164	.179	.492	1.000	.506	.259	.276	.079
NPIS(I)8	.321	.170	.103	.026	-.032	.573	.506	1.000	.096	.400	-.116
NPIS(I)9	.082	.105	.130	.184	.207	.060	.259	.096	1.000	.033	.408
NPIS(I)10	.400	.167	.192	-.094	-.245	.374	.276	.400	.033	1.000	.025
NPIS(I)11	-.055	.125	.108	.219	.231	-.101	.079	-.116	.408	.025	1.000

Item-total statistics				
Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted

NPIS(I)1	47.79	73.880	.360	.269	.669
NPIS(I)2	48.48	71.137	.405	.249	.661
NPIS (I)3	48.62	70.570	.384	.235	.664
NPIS(I)4	49.65	72.181	.295	.226	.680
NPIS(I)5	50.23	75.741	.201	.237	.696
NPIS(I)6	48.00	72.024	.441	.441	.657
NPIS(I)7	48.38	67.847	.519	.415	.641
NPIS(I)8	48.32	72.515	.382	.444	.665
NPIS(I)9	49.42	73.997	.320	.233	.675
NPIS(I)10	47.69	76.254	.275	.360	.681
NPIS(I)11	49.61	76.486	.192	.262	.696

Scale statistics			
Mean	Variance	SD	N of items
62.46	108.345	10.409	12

4.3.6 Item analysis of the Professionalism subscale

A 12-item unidimensional Professionalism subscale of the NPIS was used to measure this construct. As indicated in Table 4.6, an internal consistency reliability Cronbach's alpha coefficient of α = .818 was obtained for the Professionalism subscale, which is good (Gliem & Gliem, 2003; Pallant, 2016). As indicated in Table 4.6, only one of the corrected Item-Total Correlations was less than .30, with values ranging from .249 to .628. None of the items would result in an increase in alpha if deleted. The mean Inter-Item Correlation is 62.46, which suggests slight, almost negligible, to acceptable and marked relationships among the Professionalism items.

Table 4.6

The reliability analysis output for the Professionalism subscale

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.818	.824	12

Inter-item correlation matrix

	NPIS(P)1	NPIS(P)2	NPIS(P)3	NPIS(P)4	NPIS(P)5	NPIS(P)6	NPIS(P)7	NPIS(P)8	NPIS(P)9	NPIS(P)10	NPIS(P)11	NPIS(P)12
NPIS(P)1	1.000	.419	.609	.180	.690	.332	.522	.192	.386	.287	-.024	.046
NPIS(P)2	.419	1.000	.432	.491	.210	.443	.240	.185	.333	.276	.191	.231
NPIS(P)3	.609	.432	1.000	.250	.571	.312	.468	.281	.415	.326	.081	.259
NPIS(P)4	.180	.491	.250	1.000	.073	.372	-.007	.117	.185	.092	-.041	.231
NPIS(P)5	.690	.210	.571	.073	1.000	.285	.553	.147	.331	.270	.094	.081
NPIS(P)6	.332	.443	.312	.372	.285	1.000	.296	.175	.250	.191	.020	.210
NPIS(P)7	.522	.240	.468	-.007	.553	.296	1.000	.367	.462	.450	.222	.277
NPIS(P)8	.192	.185	.281	.117	.147	.175	.367	1.000	.431	.292	.224	.237
NPIS(P)9	.386	.333	.415	.185	.331	.250	.462	.431	1.000	.504	.216	.247
NPIS(P)10	.287	.276	.326	.092	.270	.191	.450	.292	.504	1.000	.377	.300
NPIS(P)11	-.024	.191	.081	-.041	.094	.020	.222	.224	.216	.377	1.000	.343
NPIS(P)12	.046	.231	.259	.231	.081	.210	.277	.237	.247	.300	.343	1.000

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
NPIS(P)1	56.73	91.525	.563	.629	.797
NPIS(P)2	57.60	88.278	.555	.477	.797
NPIS(P)3	57.09	87.817	.628	.514	.790
NPIS(P)4	58.40	94.071	.311	.349	.822
NPIS(P)5	56.68	92.778	.496	.586	.803
NPIS(P)6	57.42	91.885	.455	.299	.806
NPIS(P)7	56.74	93.141	.589	.520	.797
NPIS(P)8	57.21	94.784	.398	.259	.811
NPIS(P)9	57.12	90.080	.582	.419	.795
NPIS(P)10	57.00	92.450	.512	.383	.801

NPIS(P)11	57.51	99.369	.249	.297	.822
NPIS(P)12	57.57	94.370	.378	.278	.813

Scale statistics

Mean	Variance	SD	N of items
62.46	108.345	10.409	12

4.3.7   Item analysis of the Individualism subscale

A 10-item unidimensional Individualism subscale of the NPIS was used to measure this construct. An initial reliability Cronbach's alpha coefficient of α = .327 was obtained for the Individualism subscale. Item NPISIN9R had a corrected Item-Total Correlation of r = -.507, which is less than the acceptable threshold of .30, and a negative sign (Pallant, 2016). The Item-Total Statistics indicated that the Cronbach's alpha would increase to α = .564 if this item was deleted; the item was subsequently deleted. The Cronbach's alpha was still not satisfactory and therefore it was decided to delete item NPISIN6R, which had a corrected Item-Total Correlation of r = -.180, which is less than the acceptable threshold, and a negative sign. The Item-Total Statistics indicated that the Cronbach's alpha would increase to α = .645 if this item was deleted. This item was subsequently deleted.

As indicated in Table 4.7, three of the corrected Item-Total Correlations were less than .30, for items NPIS(IN)2, NPIS(IN)4, and NPIS(IN)5, with values ranging from .223 to .503. None of the items would result in an increase in alpha if deleted. The mean Inter-Item Correlation is 37.39, which suggests slight to acceptable relationships among the Individualism items.

Table 4.7

The reliability analysis output for the Individualism subscale

Reliability statistics

Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.645	.648	8

Inter-item correlation matrix

	NPIS(IN)1	NPIS(IN)2	NPIS(IN)3	NPIS(IN)4	NPIS(IN)5	NPIS(IN)7	NPIS(IN)8	NPIS(IN)10
NPIS(IN)1	1.000	.332	.411	.186	.087	.118	.066	.143
NPIS(IN)2	.332	1.000	.195	.251	-.131	.105	.182	.133
NPIS(IN)3	.411	.195	1.000	.210	.197	.250	.211	.404
NPIS(IN)4	.186	.251	.210	1.000	-.078	.093	.102	.201
NPIS(IN)5	.087	-.131	.197	-.078	1.000	.369	.175	.189
NPIS(IN)7	.118	.105	.250	.093	.369	1.000	.336	.144
NPIS(IN)8	.066	.182	.211	.102	.175	.336	1.000	.361
NPIS(IN)10	.143	.133	.404	.201	.189	.144	.361	1.000

Item-total statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
NPIS(IN)1	32.52	41.227	.329	.246	.616
NPIS(IN)2	32.10	44.071	.259	.203	.632
NPIS(IN)3	32.71	38.644	.503	.324	.572
NPIS(IN)4	32.15	43.604	.228	.122	.640
NPIS(IN)5	33.82	41.734	.223	.216	.648
NPIS(IN)7	33.06	38.674	.387	.244	.599
NPIS(IN)8	32.71	38.803	.380	.229	.601
NPIS(IN)10	32.65	39.500	.418	.268	.592

Scale statistics

Mean	Variance	SD	N of items
37.39	50.693	7.120	8

4.4   DIMENSIONALITY ANALYSIS

The purpose of dimensionality analysis is to establish the number of components/factors/dimensions a scale consists of (Pallant, 2016). Stated differently, Steenkamp and Van Trijp (1991) maintain that dimensionality analysis allows for establishing whether a measure consists of a single dimension, i.e., is unidimensional, or more than one dimensions, i.e., is multidimensional, so as not to distort observations and analysis. This section presents the EFA results, which incorporate dimensionality analysis of the various measures/scales utilised in this study. Dimensionality analysis was conducted by means of SPSS version 27 (2020) utilising the Data Reduction, Factor Analysis function.

Principal axis factoring (PAF) with Direct Oblimin rotation was used for factor extraction. The output includes statistics on the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value, the Bartlett's test of sphericity, the degrees of freedom (df), and the significance level, which would be inspected to either reject or accept the null hypothesis and to determine whether there is sufficient evidence that the correlation matrix of the scale was factor analysable (Pallant, 2016). To be considered suitable for factor analysis, the KMO value should be .6 or above (KMO ≥ .6) Pallant, 2016)

4.4.1   The dimensionality analysis output for the Conscientiousness dimension

The dimensionality analysis of the Conscientiousness subscale returned a KMO measure of sampling adequacy value of .847 and a Bartlett's test of sphericity statistic value of 443.926 (df = 28; p = .000), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with eigenvalues greater than 1 were obtained, which explained 57.257% variance of the factor. The scree plot also suggested that a single factor should be extracted. Item BFI38 was deleted because it was cross-loading on both factors.

Table 4.8

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test for the Conscientiousness subscale

KMO and Bartlett's test		
KMO measure of sampling adequacy		.847
Bartlett's test of sphericity	Approx. chi-square	443.926
	df	28

						Sig.			.000	

Total variance explained

Facto r	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.433	42.915	42.915	2.890	36.124	36.124	1.820	22.756	22.756
2	1.147	14.342	57.257	.576	7.198	43.322	1.645	20.566	43.322
3	.722	9.027	66.285						
4	.702	8.770	75.055						
5	.588	7.355	82.410						
6	.557	6.967	89.377						
7	.452	5.647	95.024						
8	.398	4.976	100.000						

Extraction method: PAF.

Rotated factor matrix[a]

	Factor 1	Factor 2
BFI3	.221	.669
BFI8R	.577	.238
BFI13	.200	.627
BFI18R	.693	.382
BFI23R	.673	.228
BFI28	.200	.495
BFI33	.234	.526
BFI43R	.608	.168

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in three iterations.

Figure 4.1

Scree plot: Conscientiousness subscale
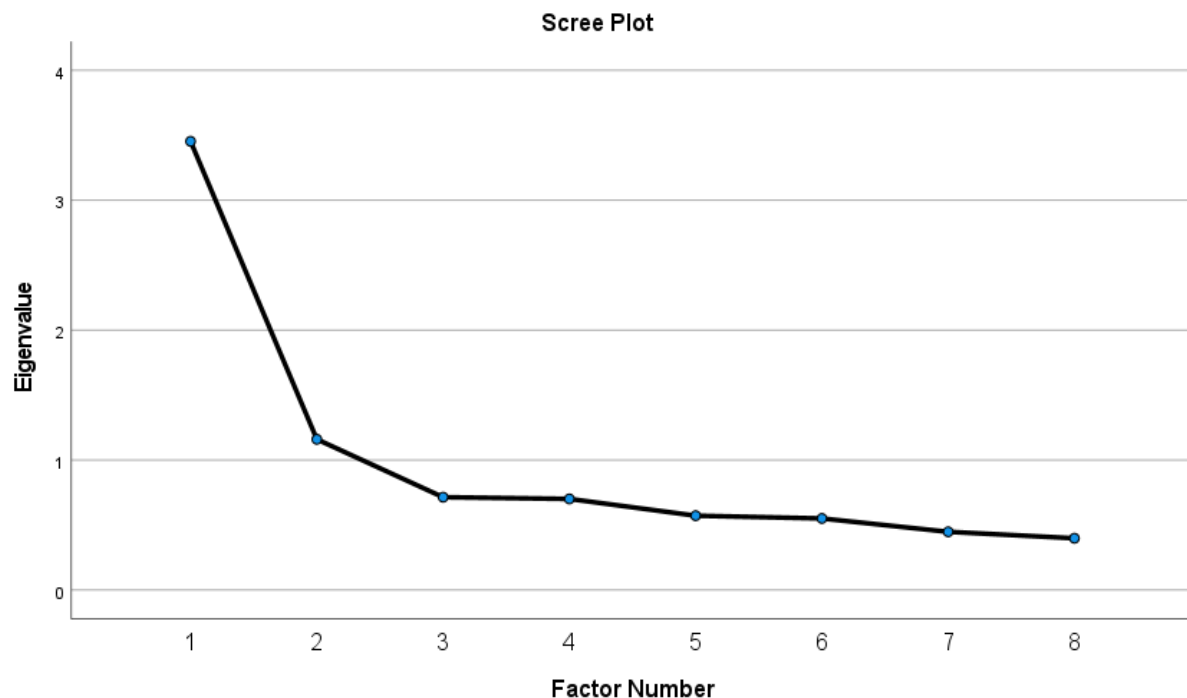
4.4.2 The dimensionality analysis output for the Openness to Experience dimension

Dimensionality analysis of the Openness to Experience subscale returned a KMO measure of sampling adequacy value of .715 and a Bartlett's test of sphericity statistic value of 127.600 (df = 6; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Only one factor with an eigenvalue greater than 1 was obtained, which explained 51% variance of the factor. The scree plot also suggested that a single factor should be extracted. The rotated factor matrix indicates that only one factor was extracted. The solution could not be rotated.

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Table 4.9

The KMO and Bartlett's test for the Openness to Experience subscale

KMO and Bartlett's test		
KMO measure of sampling adequacy.		.715
Bartlett's test of sphericity	Approx. chi-square	127.600
	df	6
	Sig.	.000

Total variance explained						
	Initial eigenvalues			Extraction sums of squared loadings		
Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.052	51.305	51.305	1.412	35.297	35.297
2	.784	19.609	70.914			
3	.616	15.404	86.318			
4	.547	13.682	100.000			

Extraction method: PFA.

Rotated factor matrix[a]

a. Only one factor was extracted. The solution cannot be rotated.

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Figure 4.2

Scree plot: Openness to Experience subscale

Scree Plot
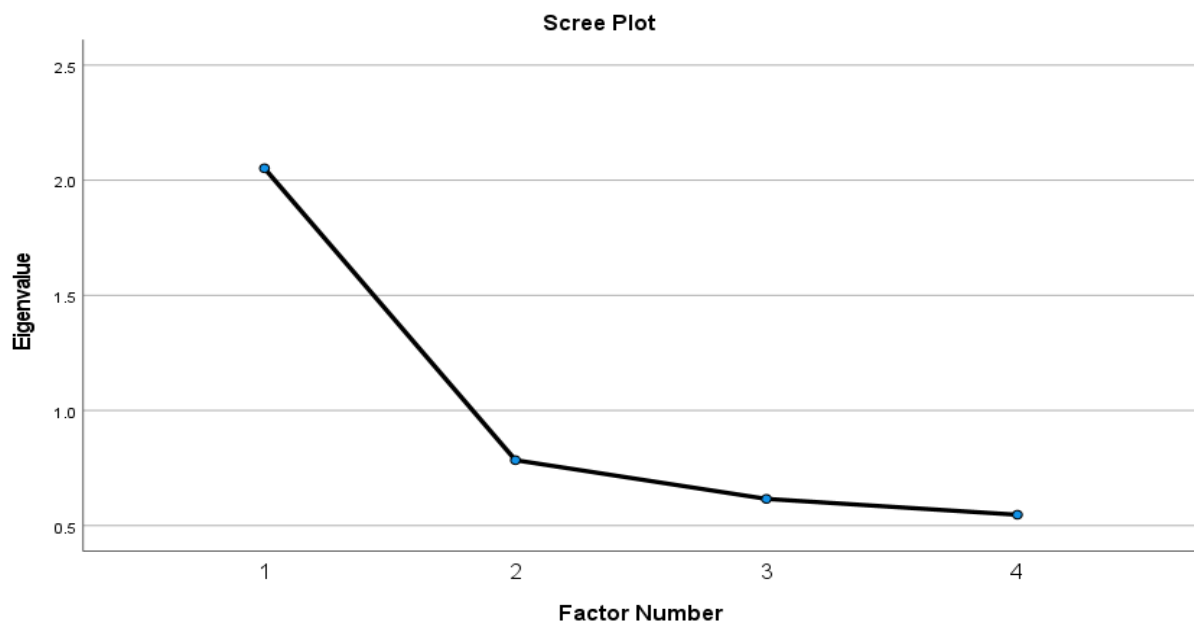
4.4.3 The dimensionality analysis output for the Neuroticism dimension

Dimensionality analysis of the Neuroticism subscale returned a KMO measure of sampling adequacy value of .817 and a Bartlett's test of sphericity statistic value of 353.150 (df = 28; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 53.14% variance of the factor. The scree plot also suggested that two factors should be extracted.

Table 4.10

The KMO and Bartlett's test for the Neuroticism subscale

KMO and Bartlett's test		
KMO measure of sampling adequacy		.817
Bartlett's test of sphericity	Approx. chi-square	353.150
	df	28
	Sig.	.000

Total variance explained

Factor	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.115	38.941	38.941	2.523	31.535	31.535	1.649	20.611	20.611
2	1.136	14.199	53.140	.545	6.806	38.342	1.418	17.730	38.342
3	.879	10.982	64.122						
4	.731	9.133	73.256						
5	.603	7.539	80.794						
6	.559	6.993	87.787						
7	.516	6.448	94.235						
8	.461	5.765	100.000						

Extraction method: PAF.

Rotated factor matrix[a]

	Factor 1	Factor 2
BFI4	.425	.163
BFI9R	.188	.511
BFI14	.517	.192
BFI19	.595	.325
BFI24R	.241	.665
BFI29	.663	.147
BFI34R	.232	.694
BFI39	.510	.206

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in three iterations.

Figure 4.3

Scree plot: Neuroticism subscale
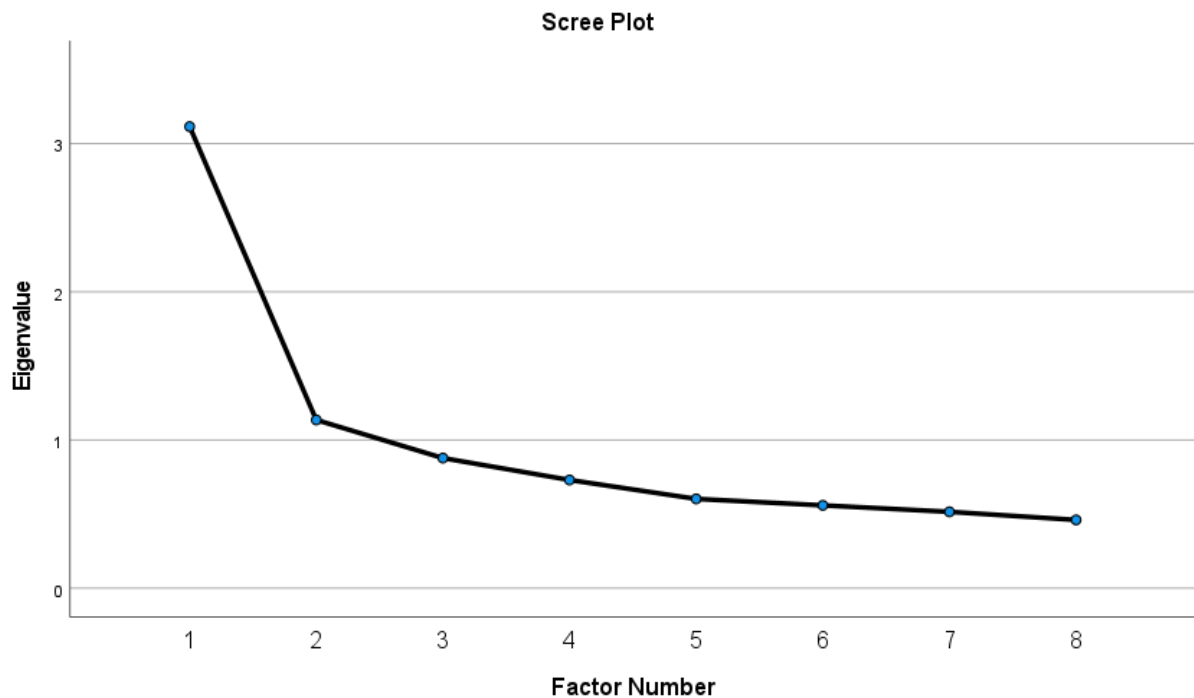
4.4.4 The dimensionality analysis output for the Selflessness dimension

Dimensionality analysis of the Selflessness scale returned a KMO measure of sampling adequacy value of .654 and a Bartlett's test of sphericity statistic value of 335.064 (df = 36; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Three factors with an eigenvalue greater than 1 were obtained, which explained 59.49% variance of the factor. The scree plot also suggested that a single factor should be extracted.

Table 4.11

The KMO and Bartlett's test for the Selflessness scale

KMO and Bartlett's test		
KMO measure of sampling adequacy		.654
Bartlett's test of sphericity	Approx. chi-square	335.064
	df	36
	Sig.	.000

	Total variance explained								
	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.537	28.193	28.193	1.988	22.093	22.093	1.465	16.278	16.278
2	1.486	16.508	44.700	1.019	11.325	33.417	1.176	13.065	29.343
3	1.328	14.752	59.452	.749	8.321	41.738	1.116	12.396	41.738
4	.871	9.674	69.126						
5	.777	8.630	77.756						
6	.644	7.157	84.913						
7	.503	5.589	90.502						
8	.469	5.211	95.713						
9	.386	4.287	100.000						

Extraction method: PAF.

Rotated factor matrix[a]			
	Factor 1	Factor 2	Factor 3
SS1	.132	.095	.719
SS2	.042	.131	.700
SS5	.862	.059	-.065
SS7	.620	.153	.235

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SS9	.202	.586	-.004
SS10	.293	.560	.001
SS11	-.093	.537	.173
SS12	.421	.102	.065
SS13	.073	.409	.120

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in five iterations.

Figure 4.4

Scree plot: Selflessness scale
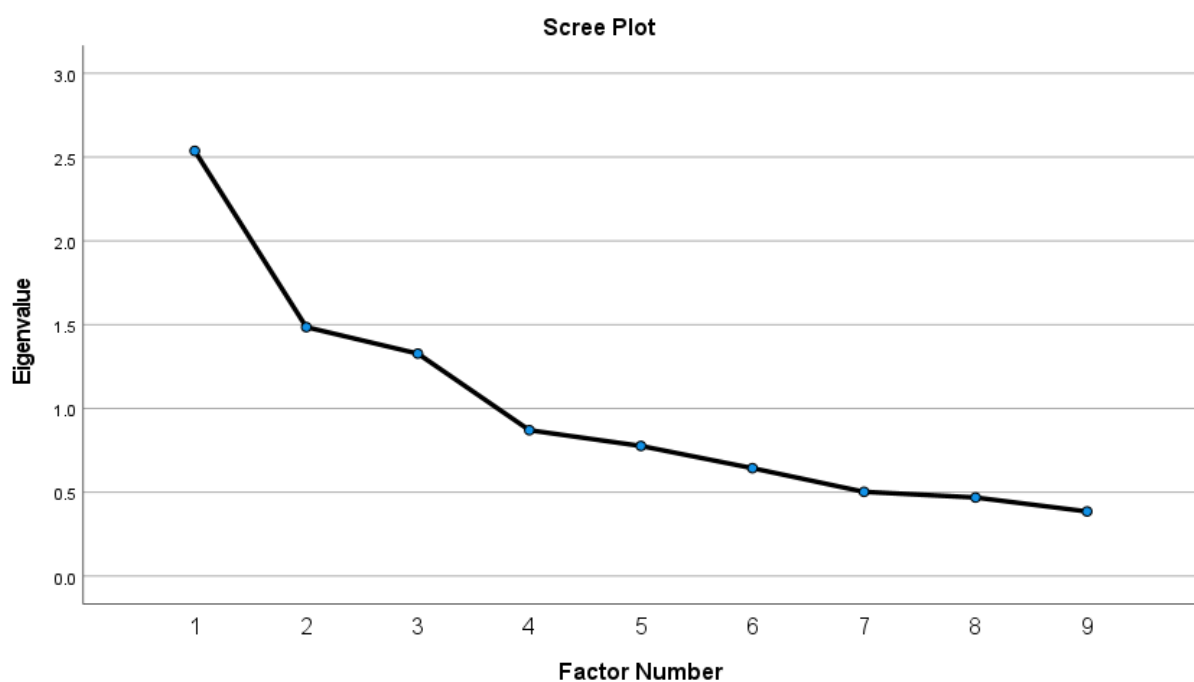
4.4.5   The dimensionality analysis output for the Idealism dimension

The dimensionality analysis of the Idealism subscale returned a KMO measure of sampling adequacy value of .694 and a Bartlett's test of sphericity statistic value of 288.445 (df = 21; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 56.58% variance of the factor. The scree plot also suggested that two factors should be extracted.

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Table 4.12

The KMO and Bartlett's test for the Idealism subscale

KMO and Bartlett's test		
KMO measure of sampling adequacy		.694
Bartlett's test of sphericity	Approx. chi-square	288.445
	df	21
	Sig.	.000

Total variance explained									
	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.362	33.737	33.737	1.871	26.727	26.727	1.843	26.328	26.328
2	1.600	22.852	56.589	.982	14.032	40.758	1.010	14.431	40.758
3	.930	13.290	69.880						
4	.708	10.108	79.987						
5	.525	7.497	87.485						
6	.463	6.611	94.095						
7	.413	5.905	100.000						

Extraction method: PAF.

Rotated factor matrix[a]		
	Factor 1	Factor 2
NPIS(I)4	.039	.343
NPIS(I)6	.751	-.014
NPIS(I)7	.629	.293
NPIS(I)8	.793	-.023
NPIS(I)9	.114	.601

NPIS(I)10	.476	-.013
NPIS(I)11	-.115	.666

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in three iterations.

Figure 4.5

Scree plot: Idealism subscale
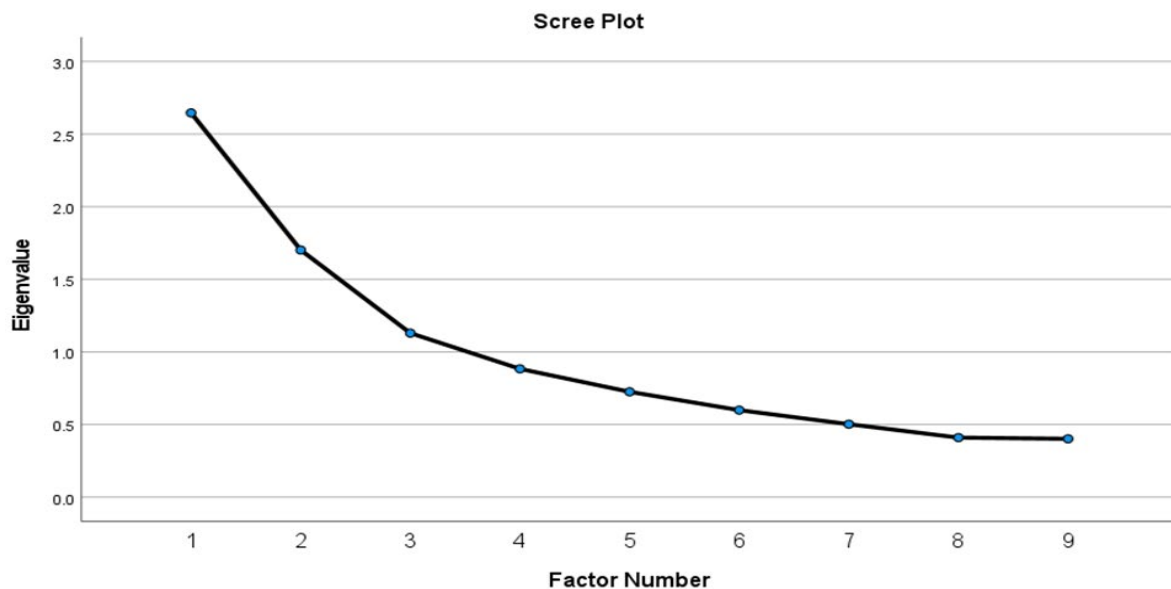
4.4.6   The dimensionality analysis output for the Professionalism dimension

The dimensionality analysis of the Professionalism subscale returned a KMO measure of sampling adequacy value of .746 and a Bartlett's test of sphericity statistic value of 639.571 (df = 36; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Three factors with an eigenvalue greater than 1 were obtained, which explained 69.24% variance of the factor. The scree plot also suggested that three factors should be extracted.

Table 4.13

The KMO and Bartlett's Test for the Professionalism subscale

KMO and Bartlett's test

KMO measure of sampling adequacy		.746
Bartlett's test of sphericity	Approx. chi-square	639.571
	df	36
	Sig.	.000

Total variance explained

	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.419	37.992	37.992	3.011	33.455	33.455	2.404	26.715	26.715
2	1.474	16.380	54.372	.981	10.903	44.358	1.271	14.120	40.835
3	1.338	14.871	69.243	.884	9.817	54.175	1.201	13.340	54.175
4	.705	7.837	77.080						
5	.587	6.528	83.608						
6	.457	5.083	88.691						
7	.441	4.897	93.587						
8	.337	3.741	97.328						
9	.240	2.672	100.000						

Extraction method: PAF.

Rotated factor matrix[a]

|	Factor 1	Factor 2	Factor 3
NPIS(P)1	.862	-.043	.228
NPIS(P)2	.281	.232	.619
NPIS(P)3	.652	.182	.320
NPIS(P)4	.029	.016	.772
NPIS(P)5	.800	.082	.020
NPIS(P)7	.642	.406	-.040
NPIS(P)10	.317	.555	.087
NPIS(P)11	.005	.652	-.021
NPIS(P)12	.053	.526	.239

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in five iterations.

Figure 4.6

Scree plot: Professionalism subscale
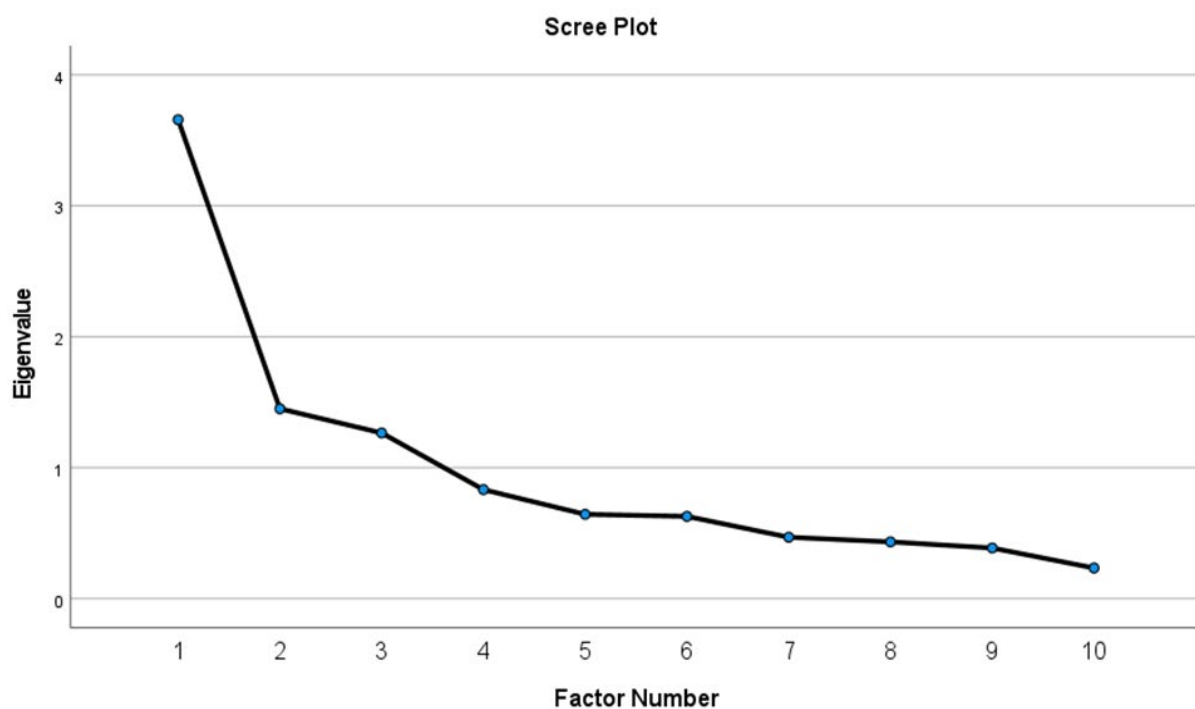
4.4.7 The dimensionality analysis output for the Individualism dimension

The dimensionality analysis of the Individualism subscale returned a KMO measure of sampling adequacy value of .521 and a Bartlett's test of sphericity statistic value of 87.447 (df = 10; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 58.92% variance of the factor. The scree plot also suggested that two factors should be extracted.

Table 4.14

The KMO and Bartlett's test for the Individualism subscale

KMO and Bartlett's test		
KMO measure of sampling adequacy		.521
Bartlett's test of sphericity	Approx. chi-square	87.447
	df	10
	Sig.	.000

Total variance explained										
	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings			
Factor	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	
1	1.581	31.625	31.625	.923	18.452	18.452	.912	18.243	18.243	
2	1.365	27.300	58.924	.893	17.858	36.311	.903	18.068	36.311	
3	.830	16.596	75.520							
4	.698	13.968	89.488							
5	.526	10.512	100.000							

Extraction method: PAF.

Rotated factor matrix[a]

	Factor 1	Factor 2
NPIS(IN)1	.159	.470
NPIS(IN)2	-.038	.701
NPIS(IN)4	-.006	.382
NPIS(IN)5	.813	-.136
NPIS(IN)7	.474	.166

Extraction method: PAF.

Rotation method: Varimax with Kaiser normalisation.

a. Rotation converged in three iterations.

Figure 4.7

Scree plot: Individualism subscale
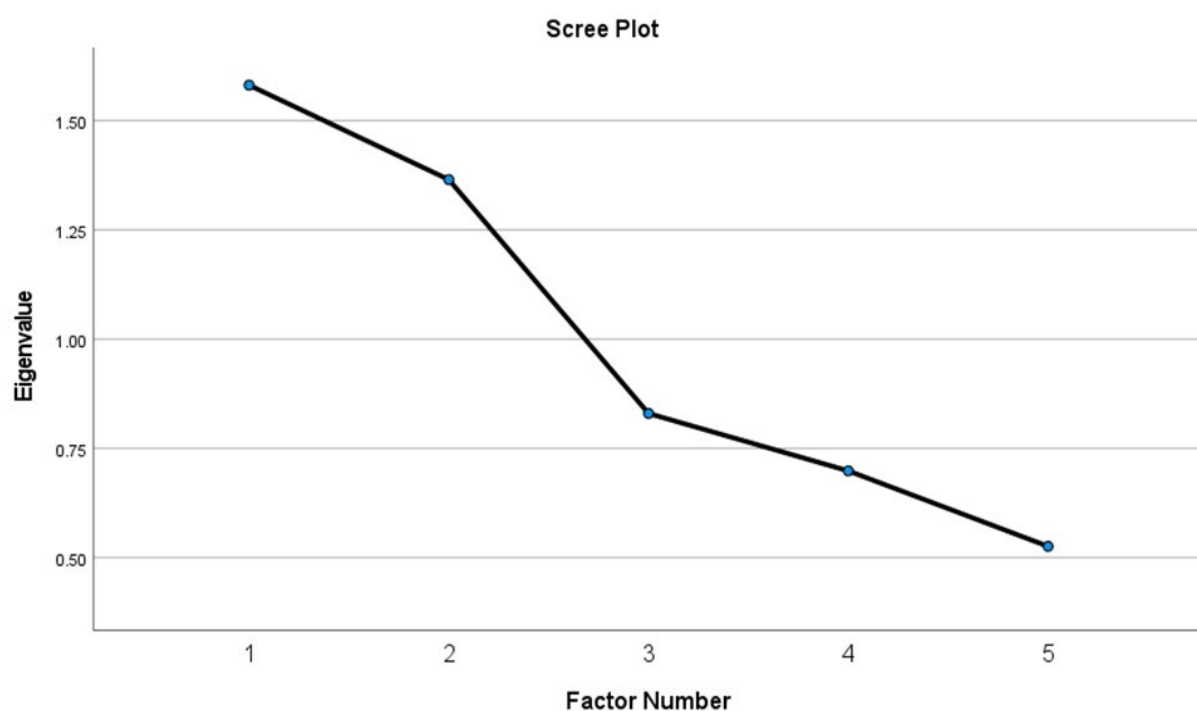
4.5 EVALUATING THE FIT OF THE MEASUREMENT MODELS VIA CONFIRMATORY FACTOR ANALYSIS (CFA) IN LINEAR STRUCTURAL RELATIONSHIPS (LISREL)

One variable of the study, Conscientiousness, was conceptualised as multidimensional. The scales used to operationalise this variable therefore necessarily had to reflect the multidimensional nature of the latent variables they were meant to reflect. The item and dimensionality analyses for the measure of this latent variable were performed separately for

each of the subscales of the instrument. To formally examine the construct validity of the measure, CFA had to be performed. The fit of the measurement model describing the way the composite indicator variables were earmarked to represent specific latent variables in the structural model is subsequently discussed. The measurement model represents the relationship between the latent variable and its manifest indicators and is expressed by Equation 4.1:

$$X = \Lambda X \xi + \delta \qquad\qquad\qquad [4.1]$$

The symbol ΛX represents the p x m matrix of factor loading coefficients (λ), which indicate the loading of the p composite indicators on their designated latent variable. The vector of latent variables is signified by the symbol ξ (ksi), whereas the symbol δ (delta) is used to indicate a vector of measurement error terms (Diamantopoulos & Siguaw, 2000). X represents a vector of composite indicator variables. Ultimately, the purpose of the CFA is to determine whether the operationalisation of the latent variables comprising the measurement model in terms of item indicators was successful.

The operationalisation can be considered successful if the measurement models specified in Equation 4.1 can successfully reproduce the observed covariance matrix (i.e., if the model fits well) and if the measurement model parameter estimates indicate that the majority of the variance in the indicator variables can be explained in terms of the latent variables they were designed to reflect. Equation 4.2 describes the expression through which the reproduced covariance matrix is derived from the measurement model parameter estimates (Brown, 2006).

$$\Sigma = \Lambda X \Psi \Lambda'X + \Theta \qquad\qquad\qquad [4.2]$$

Σ is the p x p symmetric covariance matrix for the p composite indicators. The credibility of the measurement model was judged based on the RMSEA, p-value for the test close fit index, as well as the CFI, RFI, IFI, and absolute fit index. The completely standardised factor loadings are also discussed to evaluate the strength of the indicator factor loadings on the latent variable.

4.5.1   Evaluating the fit of the revised Conscientiousness subscale measurement model

CFA was performed on the items of the revised Conscientiousness subscale. For the purposes of CFA, the measurement model was treated as an exogenous model simply due to programming advantages. The imputed data were first entered into PRELIS (Jöreskog & Sörbom, 1996) to compute a covariance matrix and an asymptotic covariance matrix to serve as input for the LISREL analysis. All variables were defined as continuous. Robust maximum likelihood estimation was used to estimate the parameters set free in the model because of the lack of multivariate normality in the data. The measurement model converged in five iterations. Careful inspection of the theta-delta modification indices resulted in the deletion of item BFI38. Further CFA was conducted with the remaining items. The full spectrum of fit statistics is shown in Table 4.15.

An examination of the GFIs indicates that the model achieved reasonable model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .0060 indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.0; .0649) is more than the critical cut-off value of .05, thereby confirming a reasonable model fit. The results are depicted in Table 4.15.

LISREL 8.80 also explicitly tests the null hypothesis of close fit. Table 4.15 indicates that the null hypothesis of close model fit (H_{02}: RMSEA ≤ .05) is rejected at a 5% significance level (p < .05), with a p-value for test of model fit of .82; thus, failing to provide evidence of close fit of the model. The RMSR of .044 indicates a good fit; the standardised RMSR value of .031 is also indicative of a good model fit (< .05) level.

The results of the incremental fit measures in Table 4.15 indicate that, when compared to a baseline model, the revised Conscientiousness scale measurement model achieved NNFI (1.00), CFI (1.00), IFI (1.0), NFI (.98), RFI (.97), and GFI (.98) indices, which exceeded .90 thresholds, which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices thus seem to portray a positive picture of model fit.

Table 4.15

Goodness of fit statistics for the revised Conscientiousness scale measurement model

Goodness of fit statistics	
df	13
Minimum fit function chi-square	15.35 (p = 0.29)
Normal theory weighted least squares chi-square	15.05 (p = 0.30)
Satorra-Bentler scaled chi-square	13.10 (p = 0.44)
Chi-square corrected for non-normality	11.97 (p = 0.53)
Estimated NCP	0.099
90% confidence interval for NCP	(0.0; 12.92)
Minimum fit function value	0.073
Population discrepancy function value (F0)	0.00047
90% confidence interval for F0	(0.0; 0.061)
RMSEA	0.0060
90% confidence interval for RMSEA	(0.0; 0.069)
P-value for test of close fit (RMSEA < 0.05)	0.82
ECVI	0.20
90% confidence interval for ECVI	(0.20; 0.27)
ECVI for saturated model	0.27
ECVI for independence model	3.01
Chi-square for independence model with 21 df	621.08
Independence Akaike information criterion (AIC)	635.08
Model AIC	43.10
Saturated AIC	56.00
Independence consistent Akaike information criterion (CAIC)	665.58
Model CAIC	108.45
Saturated CAIC	177.98
NFI	0.98
NNFI	1.00
Parsimony Normed Fit Index (PNFI)	0.61
CFI	1.00
IFI	1.00
RFI	0.97
Critical N (CN)	447.01
RMSR	0.044
Standardised RMSR	0.031
GFI	0.98
Adjusted Goodness of Fit Index (AGFI)	0.96
Parsimony Goodness of Fit Index (PGFI)	0.46

4.5.1.1 The unstandardised lambda-X matrix

The unstandardised lambda-X matrix provides an indication of the statistical significance of the slope of the regression of the observed variables onto their respective latent variables. It also provides an indication of the validity of the measures. In other words, if a measure is

designed to provide a valid reflection of a specific latent variable, then the slope of the regression of Xi on ξj in the fitted measurement model must be substantial and significant (Diamantopoulos & Siguaw, 2000).

The unstandardised Λx matrix contains the regression coefficients of the regression of the manifest variables on the latent variables they were linked to. The regression coefficients of the manifest variables on the latent variables are significant (p < .05) if the t-values, as indicated in the matrix, exceed 1.65 at p < .05 (Anuwichanont, & Mechinda, 2011; Parasuraman et al., 2005). Significant indicator loadings provide validity evidence in favour of the indicators (Diamantopoulos & Siguaw, 2000). As indicated in Table 4.16, all the revised Conscientiousness scale manifest variables loaded significantly (p < .01) on the latent variables that they were designed to reflect. In the lambda-X matrix, the t-values (highlighted in Table 4.16) appear directly under the standard error estimates in brackets. Significant loadings confirm the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.16

Unstandardised lambda-X matrix of the revised Conscientiousness scale

	CONS1	CONS2
BFI3	0.75	- -
	(0.08)	
	9.10	
BFI13	0.72	- -
	(0.08)	
	8.66	
BFI33	0.56	- -
	(0.08)	
	6.94	
BFI8R	- -	0.79
		(0.08)
		10.01
BFI18R	- -	0.96
		(0.06)
		14.80
BFI23R	- -	0.86
		(0.08)
		10.72
BFI43R	- -	0.80
		(0.08)
		10.30

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Although the unstandardised lambda-X matrix indicates that the factor loadings were significant, Diamantopoulos and Siguaw (2000) warn against absolute reliance on unstandardised loadings and their associated t-values. The problem is that it may be difficult to compare the validity of different indicators that measure a particular construct. This is because indicators of the same construct may be measured on very different scales. Direct comparisons of the magnitudes of the loadings are thus inappropriate. Furthermore, since each latent variable must be assigned a scale by fixing the loadings of one of its indicators to a unit, the loadings of the other indicators for that latent variable are only interpretable relative to the unit of the reference indicator. If a different indicator is used as the reference variable, the magnitudes of the loadings will change and the magnitudes of the standardised loadings should therefore also be inspected (Diamantopoulos & Siguaw, 2000). The standardised loadings are shown in Table 4.17.

Table 4.17

Completely standardised factor loading estimates for the revised Conscientiousness scale (first-order)

	CONS1	CONS2
BFI3	0.69	- -
BFI13	0.66	- -
BFI33	0.59	- -
BFI8R	- -	0.64
BFI18R	- -	0.81
BFI23R	- -	0.68
BFI43R	- -	0.61

Table 4.17 shows the completely standardised factor loadings. The values shown in the completely standardised solution loading matrix represent the slopes of the regression of the standardised items on the standardised latent dimension that the item was designed to represent. The completely standardised loadings thus indicate the average change expressed in standard deviations (SD) in the item associated with one SD change in the latent variable. The factor loadings of the items were generally satisfactorily large (> .50), which were considered acceptable.

Figure 4.8

Fitted Conscientiousness model
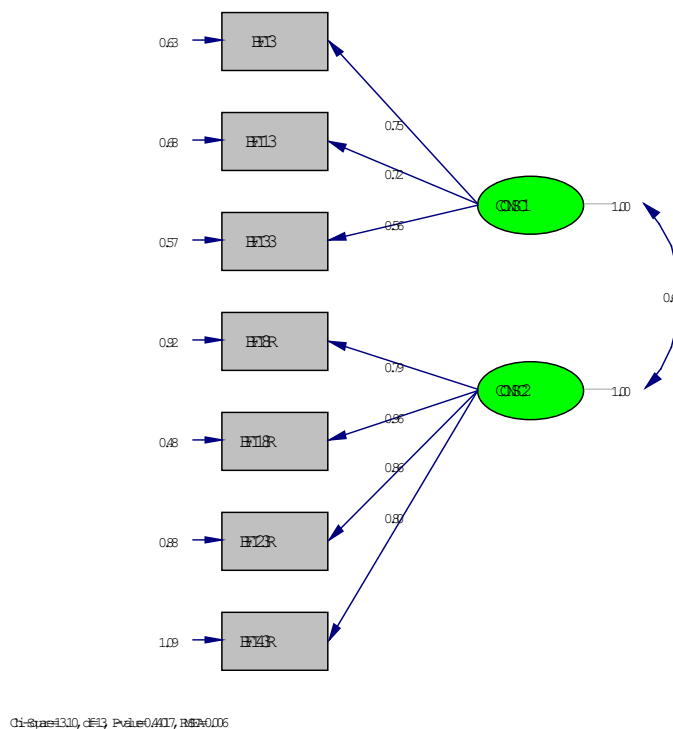
4.5.2   Evaluating the fit of the revised Openness to Experience scale measurement model

CFA was also performed on the items of the revised Openness to Experience scale. The same procedures used to conduct CFA as described in Section 4.5.1 were adopted. Careful inspection of the theta-delta modification indices resulted in the deletion of items BFI25, BFI30, BFI40, and BFI44. Further CFA was conducted with the remaining items. The measurement model converged in four iterations. The full spectrum of fit statistics is shown in Table 4.18. An examination of the GFIs indicates that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .047 indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.00; .15) is .15, which confirmed a poor model fit. The results are depicted in Table 4.18. Table 4.18 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit.

The RMSR of .11 indicated a mediocre fit; the standardised RMSR value of .039, which was well below the cut-off value (< .05), further confirmed the good model fit level. The results of the incremental fit measures in Table 4.18 indicate that, when compared to a baseline model, the revised Openness to Experience scale measurement model achieved NNFI (.98), CFI (.99),

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IFI (.99), NFI (.98), RFI (.95), and GFI (.97), all exceeding the .90 threshold, which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

Table 4.18

Goodness of fit statistics for the revised Openness to Experience scale measurement model

Goodness of fit statistics	
df	2
Minimum fit function chi-square	4.20 (p = 0.12)
Normal theory weighted least squares chi-square	4.21 (p = 0.12)
Satorra-Bentler scaled chi-square	2.93 (p = 0.23)
Chi-square corrected for non-normality	3.70 (p = 0.16)
Estimated NCP	0.93
90% confidence interval for NCP	(0.0; 9.84)
Minimum fit function value	0.020
Population discrepancy function value (F0)	0.0044
90% confidence interval for F0	(0.0; 0.047)
RMSEA	0.047
90% confidence interval for RMSEA	(0.0; 0.15)
P-value for test of close fit (RMSEA < 0.05)	0.40
ECVI	0.090
90% confidence interval for ECVI	(0.085; 0.13)
ECVI for saturated model	0.095
ECVI for independence model	0.82
Chi-square for independence model with 6 df	164.12
Independence AIC	172.12
Model AIC	18.93
Saturated AIC	20.00
Independence CAIC	189.55
Model CAIC	53.79
Saturated CAIC	63.57
NFI	0.98
NNFI	0.98
PNFI	0.33
CFI	0.99
IFI	0.99
RFI	0.95
CN	663.44

4.5.2.1   The unstandardised lambda-X matrix

As indicated in Table 4.19, all the revised Openness to Experience scale manifest variables loaded significantly on the latent variables that they were designed to reflect. In the lambda-X matrix, the t-values (highlighted in Table 4.19) appeared directly under the standard error

estimates in brackets. Significant loadings confirmed the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.19

Unstandardised lambda-X matrix of the revised Openness to Experience scale

	OPENN
BFI5	0.58
	(0.09)
	6.81
BFI10	0.52
	(0.08)
	6.30
BFI15	0.62
	(0.07)
	9.15
BFI20	0.69
	(0.06)
	10.85

Table 4.20 indicates the completely standardised factor loadings. All the factor loadings of the items were generally satisfactorily large (> .50).

Table 4.20

Completely standardised factor loading estimates for the revised Openness to Experience scale (first-order)

	OPENN
BFI5	0.56
BFI10	0.50
BFI15	0.65
BFI20	0.67

Figure 4.9

Fitted Openness to Experience model
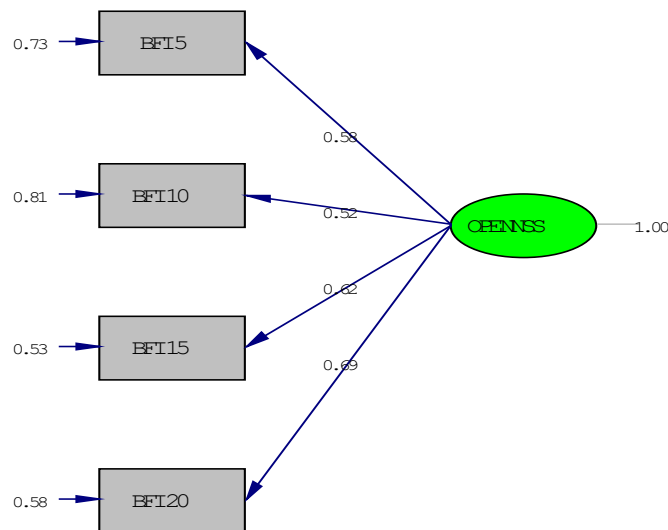
Chi-Square=2.93, df=2, P-value=0.23063, RMSEA=0.047

4.5.3 Evaluating the fit of the revised Neuroticism scale measurement model

CFA was also performed on the items of the revised Neuroticism scale. The same procedures used for conducting CFA for the revised Conscientiousness scale described in Section 4.5.1 were adopted. Careful inspection of the theta-delta modification indices resulted in the deletion of item BFI14. Further CFA was conducted with the remaining items. The measurement model converged in five iterations.

The full spectrum of fit statistics is shown in Table 4.21. An examination of the GFIs indicated that the model has achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .035 indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.00; .081) was .081, which confirmed acceptable model fit. The results are depicted in Table 4.21. Table 4.21 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .052 indicated a mediocre fit; the standardised RMSR value of .038, which was well below the cut-off value (< .05), further confirmed the good model fit level.

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The results of the incremental fit measures in Table 4.21 indicate that, when compared to a baseline model, the revised Neuroticism scale measurement model achieved NNFI (.99), CFI (.99), IFI (.99), NFI (.96), RFI (.94), and GFI (.98), all exceeding .90 thresholds, which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

Table 4.21

Goodness of fit statistics for the revised Neuroticism scale measurement model

Goodness of fit statistics	
df	13
Minimum fit function chi-square	17.84 (p = 0.16)
Normal theory weighted least squares chi-square	17.38 (p = 0.18)
Satorra-Bentler scaled chi-square	16.28 (p = 0.23)
Chi-square corrected for non-normality	21.31 (p = .067)
Estimated NCP	3.28
90% confidence interval for NCP	(0.0; 17.79)
Minimum fit function value	0.085
Population discrepancy function value (F0)	0.016
90% confidence interval for F0	(0.0; 0.084)
RMSEA	0.035
90% confidence interval for RMSEA	(0.0; 0.081)
P-value for test of close fit (RMSEA < 0.05)	0.66
ECVI	0.22
90% confidence interval for ECVI	(0.20; 0.29)
ECVI for saturated model	0.27
ECVI for independence model	2.26
Chi-square for independence model with 21 df	463.28
Independence AIC	477.28
Model AIC	46.28
Saturated AIC	56.00
Independence CAIC	507.77
Model CAIC	111.63
Saturated CAIC	177.98
NFI	0.96
NNFI	0.99
PNFI	0.60
CFI	0.99
IFI	0.99
RFI	0.94
CN	359.81
RMSR	0.052
Standardised RMSR	0.038
GFI	0.98
AGFI	0.95
PGFI	0.45

4.5.3.1 The unstandardised lambda-X matrix

As indicated in Table 4.22, all the revised Neuroticism scale manifest variables loaded significantly on the latent variables that they were designed to reflect. In the lambda-X matrix, the t-values (highlighted in Table 4.22) appear directly under the standard error estimates in brackets. Significant loadings confirmed the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.22

*Unstandardised lambda-X matrix of the revised Neuroticism scale*

	Neuro1	Neuro2
BFI4	0.57	- -
	(0.09)	
	6.05	
BFI19	0.88	- -
	(0.09)	
	9.95	
BFI29	0.77	- -
	(0.09)	
	8.83	
BFI39	0.72	- -
	(0.10)	
	7.58	
BFI9R	- -	0.58
		(0.08)
		7.69
BFI24R	- -	0.80
		(0.07)
		12.17
BFI34R	- -	0.73
		(0.06)
		11.44

Table 4.23 indicates the completely standardised factor loadings. All the factor loadings of the items were generally satisfactorily large (> .50), except for BFI4, which was .46.

Table 4.23

Completely standardised factor loading estimates for the revised Neuroticism scale (first-order)

	Neuro1	Neuro2
BFI4	0.46	- -

BFI19	0.71	- -
BFI29	0.62	- -
BFI39	0.56	- -
BFI9R	- -	0.55
BFI24R	- -	0.72
BFI34R	- -	0.73

Figure 4.10

Fitted Neuroticism model
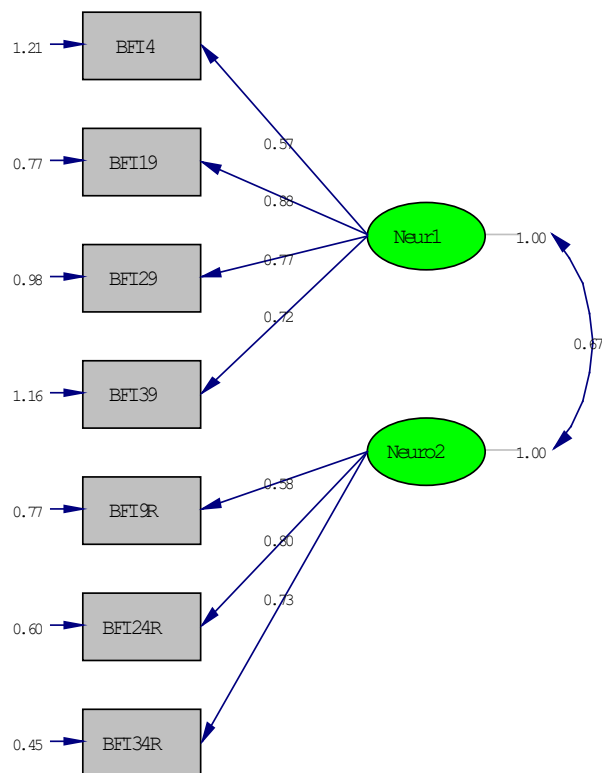
Chi-Square=16.28, df=13, P-value=0.23419, RMSEA=0.035

4.5.4   Evaluating the fit of the revised Professionalism scale measurement model

CFA was also performed on the items of the revised Professionalism scale. The same procedures used for conducting CFA for the revised Conscientiousness scale described in Section 4.5.1 were adopted. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(P)1, NPIS(P)6, NPIS(P)7, NPIS(P)8, NPIS(P)9, and NPIS(P)12. Further CFA was conducted with the remaining items. The measurement model converged in 31 iterations. The full spectrum of fit statistics is shown in Table 4.24. An examination of the GFIs indicates that the model achieved good model fit (Diamantopoulos

& Siguaw, 2000). A sample RMSEA value of .075 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.014; .13) is .13, which confirmed mediocre fit. The results are depicted in Table 4.30. Table 4.30 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .091 indicated a mediocre fit; the standardised RMSR value of .038, which was well below the cut-off value (< .05), further confirmed the good model fit level.

The results of the incremental fit measures in Table 4.24 indicate that, when compared to a baseline model, the revised Professionalism scale measurement model achieved NNFI (.94), CFI (.97), IFI (.98), NFI (.96), RFI (.89), and GFI (.98), all exceeding .90 thresholds, with the exception of RFI (.89), which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

Table 4.24

Goodness of fit statistics for the revised Professionalism scale measurement model

Goodness of fit statistics	
df	6
Minimum fit function chi-square	12.92 (p = 0.044)
Normal theory weighted least squares chi-square	12.97 (p = 0.044)
Satorra-Bentler scaled chi-square	13.13 (p = 0.041)
Chi-square corrected for non-normality	14.72 (p = 0.023)
Estimated NCP	7.13
90% confidence interval for NCP	(0.26; 21.67)
Minimum fit function value	0.061
Population discrepancy function value (F0)	0.034
90% confidence interval for F0	(0.0012; 0.10)
RMSEA	0.075
90% confidence interval for RMSEA	(0.014; 0.13)
P-value for test of close fit (RMSEA < 0.05)	0.19
ECVI	0.20
90% confidence interval for ECVI	(0.17; 0.27)
ECVI for saturated model	0.20
ECVI for independence model	1.45
Chi-square for independence model with 15 df	294.54
Independence AIC	306.54
Model AIC	43.13
Saturated AIC	42.00
Independence CAIC	332.68
Model CAIC	108.48
Saturated CAIC	133.49

NFI	0.96
NNFI	0.94
PNFI	0.38
CFI	0.97
IFI	0.98
RFI	0.89
CN	271.16
RMSR	0.091
Standardised RMSR	0.038
GFI	0.98
AGFI	0.93
PGFI	0.28

4.5.4.1 The unstandardised lambda-X matrix

As indicated in Table 4.25, all the revised Professionalism scale manifest variables loaded significantly on the latent variables that they were designed to reflect, with the exception of NPISP10 and NPISP11. In the lambda-X matrix, the t-values (highlighted in Table 4.25) appear directly under the standard error estimates in brackets. Significant loadings confirmed the validity of the indicators (Diamantopoulos & Siguaw, 2000).

Table 4.25

Unstandardised lambda-X matrix of the revised Professionalism scale

	MILP1	MILP2	MILP3
NPISP2	- -	1.63 (0.19) 8.62	- -
NPISP3	1.50 (0.14) 10.55	- -	- -
NPISP4	- -	0.92 (0.16) 5.89	- -
NPISP5	0.85 (0.12) 7.12	- -	- -
NPISP10	- -	- -	1.43 (0.33) 4.38
NPISP11	- -	- -	0.52 (0.16) 3.30

Table 4.26 indicates the completely standardised factor loadings. All the factor loadings of the items are generally satisfactorily large (> .50), with the exception of NPISP11 (3.30).

Table 4.26

Completely standardised factor loading estimates for the revised Professionalism scale (first-order)

	MILP1	MILP2	MILP3
NPISP2	- -	0.98	- -
NPISP3	0.97	- -	- -
NPISP4	- -	0.50	- -
NPISP5	0.60	- -	- -
NPISP10	- -	- -	1.01
NPISP11	- -	- -	0.37

Figure 4.11

Fitted Professionalism model
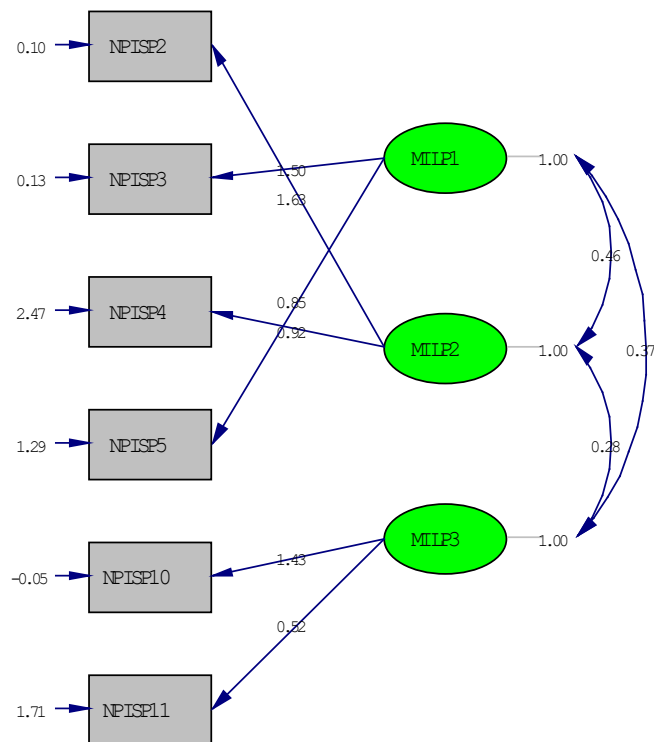
Chi-Square=13.13, df=6, P-value=0.04101, RMSEA=0.075

4.5.5 Evaluating the fit of the revised Idealism scale measurement model

CFA was also performed on the items of the revised Idealism scale. The same procedures used to conduct CFA for the revised Conscientiousness scale described in Section 4.5.1 were

adopted. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(I)1, NPIS(I)2, NPIS(I)3, NPIS(I)5, and NPIS(I)7. Further CFA was conducted with the remaining items. The measurement model converged in 11 iterations. The full spectrum of fit statistics is shown in Table 4.27. An examination of the GFIs indicates that the model has achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .068 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.010; .12) was .12, which confirmed a mediocre fit. The results are depicted in Table 4.27. Table 4.27 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .15 indicated a mediocre fit; the standardised RMSR value of .053 was just above the cut-off value (< .05).

The results of the incremental fit measures in Table 4.27 indicate that, when compared to a baseline model, the revised Idealism scale measurement model achieved NNFI (.92), CFI (.96), IFI (.96), NFI (.92), RFI (.85), and GFI (.97), all exceeding .90 thresholds, with the exception of RFI (.85), which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

Table 4.27

Goodness of fit statistics for the revised Idealism scale measurement model

Goodness of fit statistics	
df	8
Minimum fit function chi-square	17.74 (p = 0.023)
Normal theory weighted least squares chi-square	17.79 (p = 0.023)
Satorra-Bentler scaled chi-square	15.86 (p = 0.044)
Chi-square corrected for non-normality	12.72 (p = 0.12)
Estimated NCP	7.86
90% confidence interval for NCP	(0.18; 23.25)
Minimum fit function value	0.084
Population discrepancy function value (F0)	0.037
90% confidence interval for F0	(0.00086; 0.11)
RMSEA	0.068
90% confidence interval for RMSEA	(0.010; 0.12)
P-value for test of close fit (RMSEA < 0.05)	0.23
ECVI	0.20
90% confidence interval for ECVI	(0.16; 0.27)
ECVI for saturated model	0.20
ECVI for independence model	1.00
Chi-square for independence model with 15 df	199.16

Independence AIC	211.16
Model AIC	41.86
Saturated AIC	42.00
Independence CAIC	237.30
Model CAIC	98.49
Saturated CAIC	133.49
NFI	0.92
NNFI	0.92
PNFI	0.49
CFI	0.96
IFI	0.96
RFI	0.85
CN	268.36
RMSR	0.15
Standardised RMSR	0.053
GFI	0.97
AGFI	0.93
PGFI	0.37

4.5.5.1 The unstandardised Lambda-X matrix

As indicated in Table 4.28, all the revised Idealism scale manifest variables loaded significantly on the latent variables that they were designed to reflect, with the exception of NPISI4, NPISI9, and NPISI11. In the lambda-X matrix, the t-values (highlighted in Table 4.34) appear directly under the standard error estimates in brackets.

Table 4.28

Unstandardised lambda-X matrix of the revised Idealism scale

	MILII	MILII2
NPISI4	- -	0.51
		(0.20)
		2.61
NPISI6	1.10	- -
	(0.13)	
	8.25	
NPISI8	1.30	- -
	(0.13)	
	9.72	
NPISI9	- -	0.72
		(0.21)
		3.41
NPISI10	0.74	- -
	(0.12)	
	6.29	
NPISI11	- -	1.59

(0.39)	
4.06	

Table 4.29 indicates the completely standardised factor loadings. All the factor loadings of the items were generally satisfactorily large (> .50), with the exception NPISI4 (.26) and NPISI9 (.44).

Table 4.29

Completely standardised factor loading estimates for the revised Idealism scale (first-order)

	MILII	**MILII2**
NPISI4	- -	0.26
NPISI6	0.73	- -
NPISI8	0.80	- -
NPISI9	- -	0.44
NPISI10	0.50	- -
NPISI11	- -	0.89

Figure 4.12

Fitted Idealism model
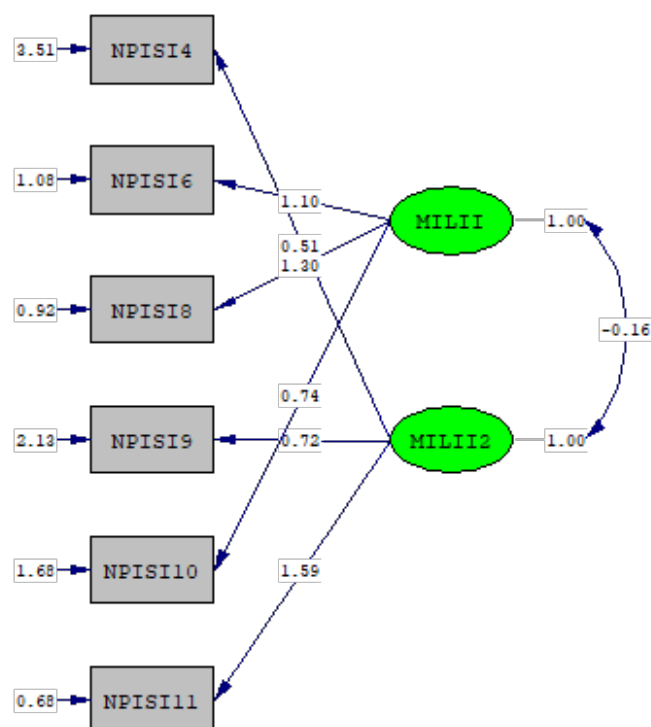
Chi-Square=15.86, df=8, P-value=0.04448, RMSEA=0.068

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4.5.6 Evaluating the fit of the revised Individualism scale measurement model

CFA was also performed on the items of the revised Individualism scale. The same procedures used to conduct CFA for the revised Conscientiousness scale described in Section 4.5.1 were adopted. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(IN)3, NPIS(IN)7, NPIS(IN)8, and NPIS(IN)10. Further CFA was conducted with the remaining items. The measurement model converged in 11 iterations.

The full spectrum of fit statistics is shown in Table 4.30. An examination of the GFIs indicates that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .050 indicates a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (0.0; .12) was .12, which confirmed mediocre fit. The results are depicted in Table 4.30. Table 4.30 indicates that the null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .20 indicated a mediocre fit; the standardised RMSR value of .067 was just above the cut-off value (< .05).

The results of the incremental fit measures in Table 4.30 indicate that, when compared to a baseline model, the revised Individualism scale measurement model achieved NNFI (.94), CFI (.98), IFI (.98), NFI (.94), RFI (.84), and GFI (.98), all exceeding .90 thresholds, with the exception of RFI (.84), which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

Table 4.30

Goodness of fit statistics for the revised Individualism scale measurement model

Goodness of fit statistics	
df	4
Minimum fit function chi-square	11.58 (p = 0.021)
Normal theory weighted least squares chi-square	11.24 (p = 0.024)
Satorra-Bentler scaled chi-square	6.11 (p = 0.19)
Chi-square corrected for non-normality	6.90 (p = 0.14)
Estimated NCP	2.11
90% confidence interval for NCP	(0.0; 13.01)
Minimum fit function value	0.055
Population discrepancy function value (F0)	0.010
90% confidence interval for F0	(0.0; 0.062)
RMSEA	0.050
90% confidence interval for RMSEA	(0.0; 0.12)

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P-value for test of close fit (RMSEA < 0.05)	0.42
ECVI	0.13
90% confidence interval for ECVI	(0.12; 0.18)
ECVI for saturated model	0.14
ECVI for independence model	0.51
Chi-square for independence model with 10 df	96.77
Independence AIC	106.77
Model AIC	28.11
Saturated AIC	30.00
Independence CAIC	128.55
Model CAIC	76.03
Saturated CAIC	95.35
NFI	0.94
NNFI	0.94
PNFI	0.37
CFI	0.98
IFI	0.98
RFI	0.84
CN	459.34
RMSR	0.20
Standardised RMSR	0.067
GFI	0.98
AGFI	0.92
PGFI	0.26

4.5.6.1 The unstandardised lambda-X matrix

As indicated in Table 4.31, all the revised Individualism scale manifest variables loaded significantly on the latent variables that they were designed to reflect, with the exception of NPIS(IN)5. In the lambda-X matrix, the t-values (highlighted in Table 4.34) appear directly under the standard error estimates in brackets.

Table 4.32 shows the completely standardised factor loadings. All the factor loadings of the items were generally satisfactorily large (> .50), with the exception of NPISIN5 (-0.15) with negative loadings.

Table 4.31

Unstandardised lambda-X matrix of the revised Individualism scale

	MILIDP
NPISI1	0.74
	(0.18)
	4.11
NPISI2	1.04
	(0.23)
	4.44

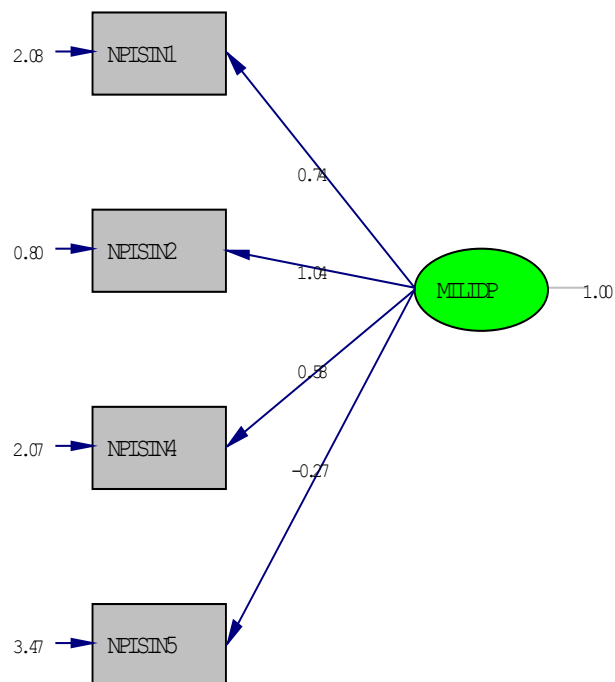|		
NPISI4	0.58	
	(0.16)	
	3.72	
NPISI5	-0.27	
	(0.19)	
	-1.45	

Table 4.32

Completely standardised factor loading estimates for the revised Individualism scale (first-order)

	MILIDP
NPISIN1	0.46
NPISIN2	0.76
NPISIN4	0.38
NPISIN5	-0.15

Figure 4.13

Fitted Individualism model

Chi-Square=5.35, df=2, P-value=0.06897, RMSEA=0.089

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4.5.7   Evaluation of overall measurement model

Having deleted a number of suspect or unstable items for each scale through item analysis, EFA, and CFA, the decision was made to use the remaining individual items instead of item parcels. Table 4.33 presents the fit indices for CFA for the revised final measurement model with the use of individual items. An RMSEA value of .078 indicated a reasonable fit (Diamantopoulos & Siguaw, 2000). The 90% confidence interval for RMSEA lower bound in this case indicated a good fit since it was .070. NNFI = .89, CFI = .90, RFI = .81, and GFI = .78 all indicated acceptable fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). The study therefore proceeded with the estimation of structural models to test the hypothesis.

Table 4.33

Goodness of fit statistics for the revised final measurement model

Goodness of fit statistics	
df	318
Minimum fit function chi-square	729.41 (p = 0.0)
Normal theory weighted least squares chi-square	793.71 (p = 0.0)
Satorra-Bentler scaled chi-square	723.57 (p = 0.0)
Estimated NCP	405.57
90% confidence interval for NCP	(331.23; 487.63)
Minimum fit function value	3.46
Population discrepancy function value (F0)	1.92
90% confidence interval for F0	(1.57; 2.31)
RMSEA	0.078
90% confidence interval for RMSEA	(0.070; 0.085)
P-value for test of close fit (RMSEA < 0.05)	0.00
ECVI	4.00
90% confidence interval for ECVI	(3.65; 4.39)
ECVI for saturated model	3.58
ECVI for independence model	20.55
Chi-square for independence model with 351 df	4282.72
Independence AIC	4336.72
Model AIC	843.57
Saturated AIC	756.00
Independence CAIC	4454.35
Model CAIC	1104.96
Saturated CAIC	2402.79
NFI	0.83
NNFI	0.89
PNFI	0.75
CFI	0.90
IFI	0.90
RFI	0.81
CN	111.69
RMSR	0.14
Standardised RMSR	0.078

GFI	0.78
AGFI	0.74
PGFI	0.66

Figure 4.14

Fitted measurement model
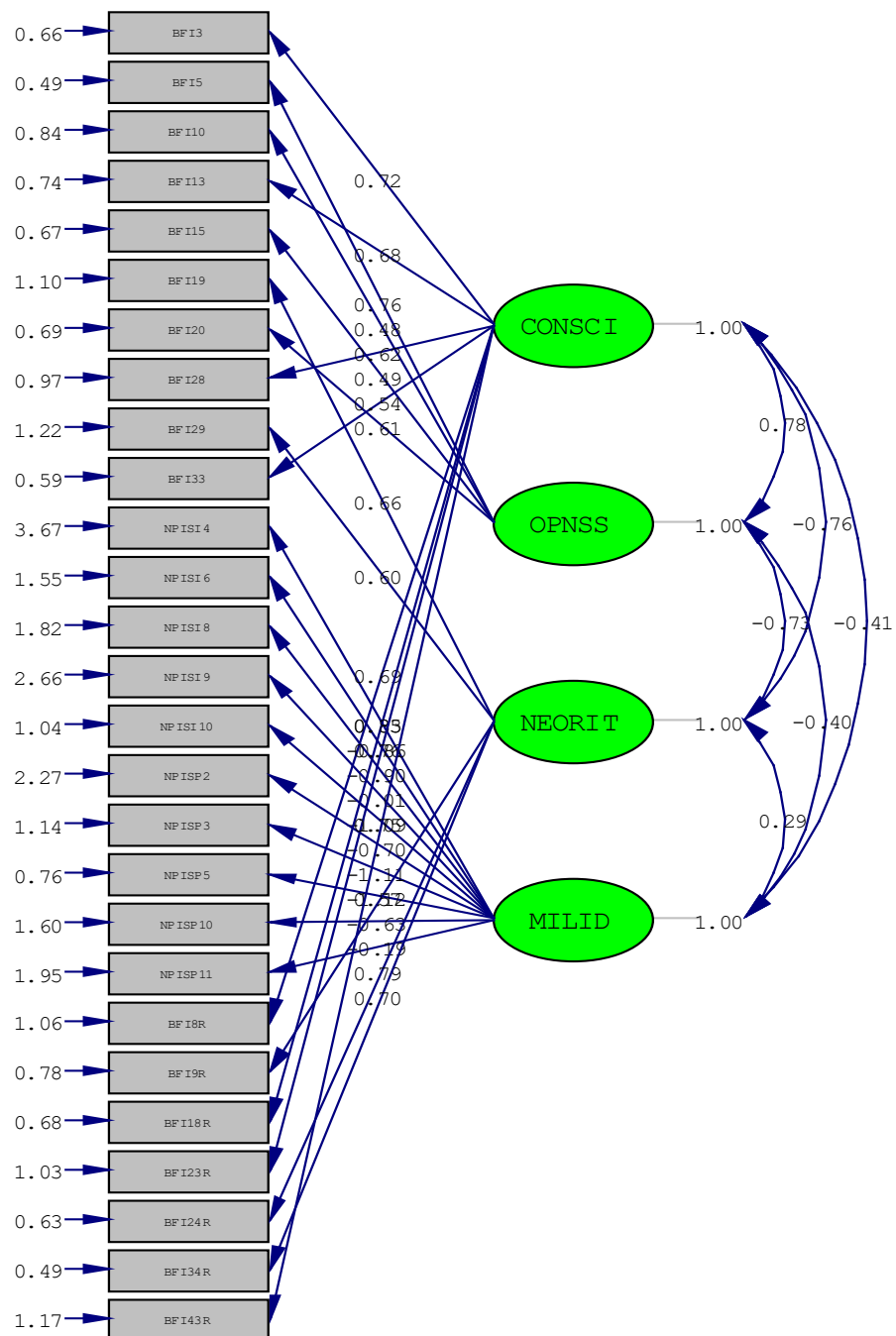
Chi-Square=723.57, df=318, P-value=0.00000, RMSEA=0.078

Table 4.34 indicates the correlation matrix results as follows: Conscientiousness has a significant positive relationship with Openness to Experience, Conscientiousness has a significant negative relationship with Neuroticism and Military Identity, and Openness to Experience has a significant negative relationship with Neuroticism and Military Identity.

Table 4.34

Correlation matrix of the revised final structural equation model

	CONS	OPENN	NEORO	MILID
BFI3	0.72 (0.06) 11.17	- -	- -	- -
BFI5	- -	0.76 (0.07) 10.58	- -	- -
BFI10	- -	0.48 (0.08) 6.35	- -	- -
BFI13	0.68 (0.06) 10.42	- -	- -	- -
BFI15	- -	0.49 (0.07) 7.38	- -	- -
BFI19	- -	- -	0.66 (0.08) 8.10	- -
BFI20	- -	0.61 (0.06) 9.87	- -	- -
BFI28	0.62 (0.07) 8.21	- -	- -	- -
BFI29	- -	- -	0.60 (0.09) 6.91	- -
BFI33	0.54 (0.06) 8.45	- -	- -	- -
NPISI4	- -	0.33 (0.15) 2.23	- -	- -
NPISI6	- -	- -	- -	-0.86 (0.09) -9.77
NPISI8	- -	- -	- -	-0.90 (0.11) -8.50
NPISI9	- -	- -	- -	-0.01

				(0.14)
				-0.05
NPISI10	- -	- -	- -	-1.09
				(0.09)
				-12.58
NPISP2	- -	- -	- -	-0.70
				(0.13)
				-5.17
NPISP3	- -	- -	- -	-1.11
				(0.09)
				-11.99
NPISP5	- -	- -	- -	-1.12
				(0.07)
				-14.97
NPISP10	- -	- -	- -	-0.63
				(0.10)
				-6.14
NPISP11	- -	- -	- -	-0.19
				(0.12)
				-1.61
BFI8R	0.69	- -	- -	- -
	(0.08)			
	8.95			
BFI9R	- -	- -	0.57	- -
			(0.07)	
			7.69	
BFI18R	0.85	- -	- -	- -
	(0.06)			
	13.22			
BFI23R	0.76	- -	- -	- -
	(0.08)			
	9.52			
BFI24R	- -	- -	0.79	- -
			(0.06)	
			13.04	
BFI34R	- -	- -	0.70	- -
			(0.06)	
			11.93	
BFI43R	0.75	- -	- -	- -
	(0.08)			
	9.33			

4.5.8   Evaluation of overall structural equation model

In line with the decision indicated in Section 4.5.7, the structural model also used the stable valid items that remained after deletion through item analysis, EFA, and CFA. Table 4.35 presents the fit indices for CFA for the revised structural equation model. An RMSEA value of .078 indicated a reasonable fit (Diamantopoulos & Siguaw, 2000). The 90% confidence interval for RMSEA lower bound in this case indicated a good fit since it was .070. GFI = 0.79

indicated an acceptable fit. NNFI = .89, CFI = .90, and RFI = .82 indicated reasonable fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010).

Table 4.35

Fit indices of the structural equation model

Goodness of fit statistics	
df	293
Minimum fit function chi-square	674.16 (p = 0.0)
Normal theory weighted least squares chi-square	729.23 (p = 0.0)
Satorra-Bentler scaled chi-square	665.24 (p = 0.0)
Estimated NCP	372.24
90% confidence interval for NCP	(301.13; 451.06)
Minimum fit function value	3.20
Population discrepancy function value (F0)	1.76
90% confidence interval for F0	(1.43; 2.14)
RMSEA	0.078
90% confidence interval for RMSEA	(0.070; 0.085)
P-value for test of close fit (RMSEA < 0.05)	0.00
ECVI	3.70
90% confidence interval for ECVI	(3.37; 4.08)
ECVI for saturated model	3.33
ECVI for independence model	19.70
Chi-square for independence model with 325 df	4105.36
Independence AIC	4157.36
Model AIC	781.24
Saturated AIC	702.00
Independence CAIC	4270.63
Model CAIC	1033.92
Saturated CAIC	2231.16
NFI	0.84
NNFI	0.89
PNFI	0.76
CFI	0.90
IFI	0.90
RFI	0.82
CN	112.72
RMSR	0.14
Standardised RMSR	0.078
GFI	0.79
AGFI	0.75
PGFI	0.66

Figure 4.15

Fitted structural equation model

Chi-Square=665.24, df=293, P-value=0.00000, RMSEA=0.078
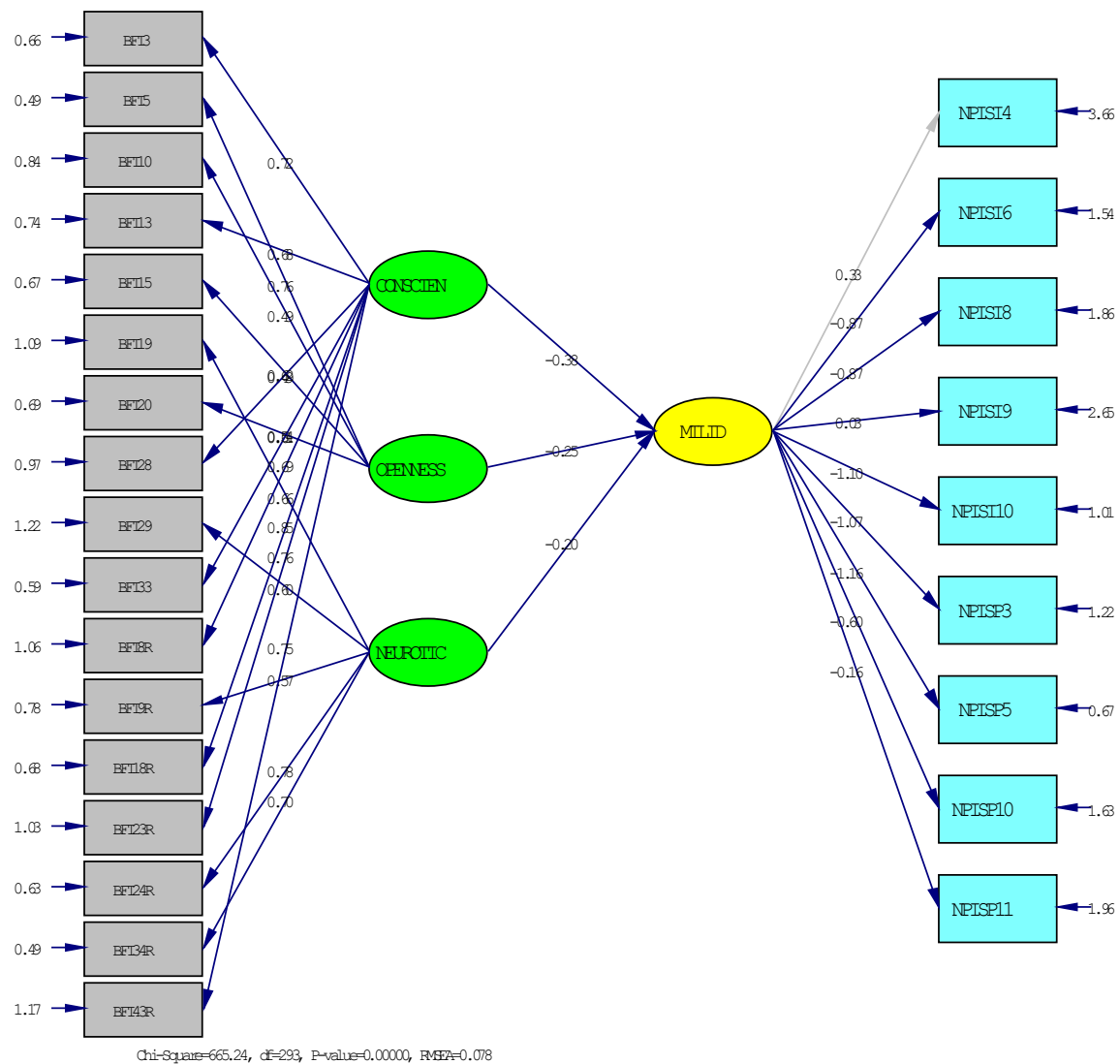
4.5.8.1 The unstandardised beta and gamma matrix

This study used unstandardised parameter estimates to evaluate the strength of the estimated path coefficients that express the significance of exogenous latent variables on endogenous latent variables and the significance of endogenous latent variables on endogenous latent variables. Gamma and beta parameters are significant based on one-tailed tests if t > 1.65 and p <. 05. Table 4.36 indicates the gamma matrix values of Hypotheses 1, 2, and 3 of the study. Table 4.37 indicates the beta matrix values for Hypotheses 4, 5, and 6 with t-values that are also highlighted.

Table 4.36

Unstandardised beta matrix

	CONS	OPENN	NEURO
BFI3	0.72 (0.06) 11.16	- -	- -
BFI5	- -	0.76 (0.07) 10.51	- -
BFI10	- -	0.49 (0.08) 6.35	- -
BFI13	0.68 (0.06) 10.40	- -	- -
BFI15	- -	0.49 (0.07) 7.38	- -
BFI19	- -	- -	0.66 (0.08) 8.13
BFI20	- -	0.61 (0.06) 9.92	- -
BFI28	0.62 (0.07) 8.23	- -	- -
BFI29	- -	- -	0.60 (0.09) 6.92
BFI33	0.54 (0.06) 8.44	- -	- -
BFI8R	0.69 (0.08) 8.96	- -	- -
BFI9R	- -	- -	0.57 (0.07) 7.71
BFI18R	0.85 (0.06) 13.17	- -	- -
BFI23R	0.76 (0.08) 9.50	- -	- -
BFI24R	- -	- -	0.78 (0.06) 13.07
BFI34R	- -	- -	0.70 (0.06) 11.96
BFI43R	0.75	- -	- -

(0.08)	
9.31	

4.5.9 Relationships between latent variables

Table 4.37

Unstandardised gamma matrix

	CONS	**OPENN**	**NEURO**
MILID	-0.38	-0.25	-0.20
	(0.27)	(0.22)	(0.22)
	-1.42	-1.13	-0.89

At this point, the relationships between endogenous and exogenous latent variables had to be examined to determine whether the data supported the links specified during the conceptualisation phase (Diamantopoulos & Siguaw, 2000). To evaluate these relationships, the signs of the parameters representing the paths between the latent variables were examined to ascertain whether the direction of the hypothesised relations was determined as theoretically conceptualised and the magnitudes of the estimated parameters were important to investigate, because this provides important information about the strength of these relationships. The results are presented in the gamma and beta matrices in Tables 4.36 and 4.37 respectively.

Hypothesis 1: Conscientiousness has a negative significant effect on Military Identity.

The results in Table 4.36 indicate that the path from Conscientiousness to Military Identity is negative and significant (γ = -0.38; t = -1.42; p > .05). A negative nonsignificant relationship between Conscientiousness and Military Identity is therefore evident. The relationship hypothesised between Conscientiousness and Military Identity in the structural model was contradicted. Therefore, Hypothesis 1, which states that Conscientiousness has a positive significant effect on Military Identity, is not substantiated. Furthermore, the sign of this significant parameter estimate was not consistent with the hypothesised nature of the relationship between those latent variables. Null Hypothesis 1, which states that Conscientiousness does not have a positive significant effect on Military Identity, was

corroborated. This finding limits the capacity of testing for moderation if the independent variable does not have a significant effect on the dependent variable.

Hypothesis 2: Openness to Experience has a negative significant effect on Military Identity.

The results in Table 4.36 indicate that the path from Openness to Experience to Military Identity is negative and non-significant (γ = -0.25; t = -1.13; p > .05). A negative nonsignificant relationship between Openness to Experience and Military Identity is therefore evident. The relationship hypothesised between Openness to Experience and Military Identity in the structural model was not collaborated. Therefore, Hypothesis 2, which states that Openness to Experience has a positive significant effect on Military Identity, is not substantiated. Furthermore, the sign of this significant parameter estimate was not consistent with the hypothesised nature of the relationship between those latent variables. Hypothesis 2, which states that Openness to Experience does not have a positive significant effect on Military Identity, was corroborated. This finding limits the capacity of testing for moderation if the independent variable does not have a significant effect on the dependent variable.

Hypothesis 3: Neuroticism has a negative and significant effect on Military Identity.

The results in Table 4.36 indicate that the path from Neuroticism to Military Identity is negative and nonsignificant (γ = -.20; t = -0.89; p > .05). A negative nonsignificant relationship between Neuroticism and Military Identity is therefore evident. The relationship hypothesised between Neuroticism and Military Identity in the structural model is not corroborated. Therefore, Hypothesis 3, which states that Neuroticism has a negative and significant effect on Military Identity, is not substantiated. Furthermore, the sign of this significant parameter estimate is consistent with the hypothesised nature of the relationship between those latent variables. Hypothesis 3, which states that Neuroticism does not have a significant effect on Military Identity, is corroborated. This finding does not permit the testing for moderation if the independent variable influences the dependent variable.

4.6   DESCRIPTIVE RESULTS OF THE VARIABLES OF THE STUDY

The descriptive results in Table 4.38 indicate that, in general, the participants of the study had above-average perceptions/levels of Military Identity (mean = 5.34; SD = .866).

Table 4.38

Descriptive results of variables of the study

Descriptive statistics						
	N	Minimum	Maximum	Mean		SD
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic
MILID	212	2.11	7.00	5.3412	.05954	.86689
CONSCIE	212	1.00	5.00	3.7193	.05371	.78206
NEURTC	212	1.00	5.00	2.4852	.05096	.74203
OPENNS	212	1.00	5.00	3.9186	.04971	.72378
SLFLSNS	212	1.18	3.82	2.5364	.02899	.42210
Valid N (listwise)	212					

The results also indicated that the participants have above-average perceptions/levels of Conscientiousness (mean = 3.71; SD = .782) and Openness to Experience (mean = 3.91; SD = .723) but below average level of Neuroticism (mean = 2.48; SD = .742). The results for Selflessness indicated a mean of 2.5 and a SD = .422, which indicate an above-average level. A minimum value of 2.11 was observed for Military Identity, which indicated that at least one participant disagreed (2.11 is closest to 2) with Military Identity. A maximum value of 7.00 was observed for Military Identity, which indicated that at least one participant strongly agreed with Military Identity. The results also indicated that at least one participant strongly disagreed with Conscientiousness, Neuroticism, and Openness to Experience, with minimum values of 1.00 for these variables. A maximum value of 5.00 observed for Conscientiousness, Neuroticism, and Openness to Experience indicated that at least one participant strongly agreed with these variables.

4.7 MULTIPLE REGRESSION RESULTS

The need for performing regression arises from the structural model results, which found no effect of the three independent variables of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity. Regression analysis is a family of techniques used to explore the relationships between two or more variables, usually continuous in nature (Pallant, 2016). Like SEM, regression analysis also needs the background of theory to identify the variables, i.e., independent variables that effectively "predict" dependent variables. Pallant (2016)

reckons that regression analysis can be used to address several research questions. Firstly, this analysis could be used to determine how well a set of variables predicts a particular outcome. Secondly, regression could be used to statistically control an additional variable when exploring the predictive ability of a model. The literature describes several types of regression analysis, namely standard multiple regression, hierarchical multiple regression, and stepwise multiple regression (Babbie, 2007; Pallant, 2016).

Standard multiple regression is applied when several predictor variables are entered into the equation simultaneously and the predictive power of each variable compared to others is assessed (Pallant, 2016). Hierarchical multiple regression is applied when the predictor variables are entered into the model in a sequence of the researcher-based theory behind that sequence. Lastly, stepwise regression is applied when the researcher uses statistical analysis to select the variables that will be used in the final analysis. For the purposes of this research, simple linear multiple regression and hierarchical regression were used to assess the effect of one variable on another and the mediation effect of one variable on the relationship between an independent and a dependent variable (where LISREL could not perform this analysis) respectively.

4.7.1 Regression of Conscientiousness, Openness to Experience, Neuroticism, and Selflessness on Military Identity

Table 4.39 R^2 result indicates that Conscientiousness, Neuroticism, Openness to Experience and selflessness explain 15.5% of variance on Military Identity. Regression ANOVA result indicates that the model is significant and valid (F = 9.46. p < .05) Conscientiousness has a positive significant effect on Military Identity (t = 2.122, p < .05).

Table 4.39

Linear regression analysis results of the effect of Conscientiousness, Openness to Experience, Neuroticism, and Selflessness on Military Identity

Model summary				
Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.393[a]	.155	.138	.80473

a. Predictors: (Constant), SLFLSNS, OPENN, NEURO, CONS

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	24.516	4	6.129	9.465	.000[b]
	Residual	134.051	207	.648		
	Total	158.567	211			

a. Dependent variable: MILID

b. Predictors: (Constant), SLFLSNS, OPENN, NEURO, CONS

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients		
		ß	Std. error	beta	t	Sig.
1	(Constant)	2.840	.716		3.966	.000
	CONSCIE	.211	.100	.191	2.122	.035
	NEURTC	-.103	.100	-.088	-1.032	.303
	OPENNS	.134	.091	.112	1.480	.140
	SLFLSNS	.571	.133	.278	4.280	.000

a. Dependent variable: MILID

The results also indicate that Selflessness has a positive and significant effect on Military Identity (t=4.280, p<.05). This relationship implies that Selflessness positively and significantly predicts Military Identity. This can further be interpreted to mean that an increase in the level of Selflessness results in an increase on Military Identity. This finding allows for conducting a mediation analysis with Selflessness in the interaction effect.

Multiple regression results furthermore indicate that Conscientiousness has a positive and significant effect on Military Identity (t= 2.122, p<.05). This result implies that Conscientiousness positively and significantly predicts Military Identity. This can further be interpreted to mean that an increase in the level of Conscientiousness results in an increase on Military Identity. This allows for conducting a mediation analysis including this variable as the main effect.

Results also indicate Neuroticism (t = -1.032, p > .05) has a negative non-significant effect on Military Identity. This relationship implies that Neuroticism negatively but not significantly, predicts Military Identity. This can further be interpreted to mean that an increase in the level of Neuroticism results in a decrease on Military Identity. This finding still prohibits the conduction of moderation effect with this variable as a main effect.

Openness to Experience results also indicated a positive non-significant effect on Military Identity (t = 1.480, p > .05). This result implies that Openness to Experience positively but not significantly predicts Military Identity. This can further be interpreted to mean that an increase in the level of Openness to Experience results in an increase on Military Identity but this effect is not significant.

The standardised coefficient results indicate that Selflessness has the largest effect on Military Identity (Beta = .278). Conscientiousness has the second largest effect on Military Identity (Beta = .191). Openness to Experience has the third largest effect on Military Identity (Beta=.112). Neuroticism has the lowest effect on Military Identity (Beta = -.088). The effect of Neuroticism and Openness to Experience on Military Identity limit conducting a moderation effect of Selflessness between these independent variables and the dependent variable of Military Identify, hence, a correlational analysis, which is presented next.

4.8   CORRELATION RESULTS

Table 4.40 presents the correlation results among the variables of the study.

Table 4.40

Correlation table

		MILID	CONSCIE	NEURTC	OPENNS	SLFLSNS
MILID	Pearson's correlation	1.00				
	Sig. (2-tailed)					
	N	212				
CONS	Pearson's correlation	.259**	1.00			
	Sig. (2-tailed)	.000				
	N	212	212			
NEURO	Pearson's correlation	-.225**	-.654**	1.00		
	Sig. (2-tailed)	.001	.000			
	N	212	212	212		
OPENN	Pearson's correlation	.215**	.514**	-.444**	1.00	
	Sig. (2-tailed)	.002	.000	.000		
	N	212	212	212	212	
SLFLSNS	Pearson's correlation	.220**	-.167*	.136*	-.122	1.00

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Sig. (2-tailed)	.001	.015	.048	.076	
N	212	212	212	212	212

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

Correlation results in Table 4.40, indicate that the relationship between Conscientiousness and Military identity is positive, small, but significant (r = .259, p < .05). This relationship indicates that an increase in Conscientiousness is associated with an increase in Military identity although this relationship is significant but it is small. This finding supports the plausibility of treating this relationship as a main effect in conducting moderation with Selflessness as a moderator.

The Correlation results also indicate that the relationship between Neuroticism and Military Identity is negative and significant (r=-.225, p< .05). This relationship indicates that an increase in Neuroticism is associated with a decrease in Military Identity although this relationship is significant, it is small. This finding further supports the plausibility of conducting moderation with this relationship as a main effect.

The relationship between Openness to Experience and Military Identity is positive, with a small relationship, but significant (r=.215, p< .05). This relationship indicates that an increase in Openness to Experience is associated with an increase in Military identity although this relationship is significant, it is small. This finding further supports the plausibility of conducting moderation with this relationship as a main effect.

Correlation results also indicate that the relationship between Selflessness and Military Identity is positive small relationship but significant (r = .220, p < .05). This relationship indicates that an increase in Selflessness is associated with an increase in Military Identity although this relationship is significant and small.

4.9   MODERATION RESULTS

This section presents the moderation effect to evaluate whether Selflessness moderates the effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity. The analysis was performed using SPSS to test for moderation, and the results of this regression analyses are presented in the next section.

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4.9.1 Moderation effect of Selflessness on the effect of Conscientiousness on Military Identity

The results in Table 4.41 indicate that when the independent variable, i.e., the interaction of Conscientiousness and Selflessness, was regressed on the dependent variable, the interaction effect has a significant effect on the dependent variable. The model R^2 of .132 indicates that the interaction effect explains 13.2% of variance on Military Identity. The coefficient results indicate that the interaction effect has a significant positive effect on Military Identity (ß = .363; t = 5.649; p < .05), thereby corroborating the moderating effect of Selflessness on the impact of Conscientiousness on Military Identity.

Table 4.41

Linear regression analysis results of the effect of Conscientiousness on Military Identity with Selflessness as a moderator

Model summary				
Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.363[a]	.132	.128	.80961

a. Predictors: (Constant), CONS_ SLFLSNS

ANOVA[a]						
Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	20.919	1	20.919	31.914	.000[b]
	Residual	137.649	210	.655		
	Total	158.567	211			

a. Dependent variable: MILID

b. Predictors: (Constant), CONS_ SLFLSNS

Coefficients[a]					
	Unstandardised coefficients		Standardised coefficients		
Model	ß	Std. error	Beta	t	Sig.

| 1 | (Constant) | 4.031 | .239 | | | 16.897 | .000 |
| | CON_SEL | .140 | .025 | .363 | | 5.649 | .000 |

a. Dependent variable: MILID

4.9.2 Moderation effect of Selflessness on the impact of Openness to Experience on Military Identity

The results in Table 4.42 indicate that when the independent variable, i.e., the interaction of Openness to Experience and Selflessness, was regressed on the dependent variable, the interaction effect had a significant effect on the dependent variable. The model R^2 of .109 indicated that the interactions effect explained 10.9% of variance on Military Identity. The coefficient results indicate that interaction effect had a significant positive effect on Military Identity (ß = .363; t = 5.649; p < .05), thereby corroborating the moderating effect of Selflessness on the effect of Openness to Experience on Military Identity.

Table 4.42

Linear regression analysis results of the effect of Openness to Experience on Military Identity with Selflessness as a moderator

Model summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.331[a]	.109	.105	.82009

a. Predictors: (Constant), OP_SEL

ANOVA[a]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	17.332	1	17.332	25.770	.000[b]
	residual	141.235	210	.673		
	total	158.567	211			

a. Dependent variable: MILID

b. Predictors: (Constant), OPENN_ SLFLSNS

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients		
		ß	Std. error	Beta	t	Sig.
1	(Constant)	4.089	.253		16.165	.000
	OP_SEL	.126	.025	.331	5.076	.000

a. Dependent variable: MILID

4.9.3   Moderation effect of Selflessness on the effect of Neuroticism on Military Identity

The results in Table 4.43 indicate that when the interaction of (Neuroticism) and the moderator (Selflessness), computed s a product of these two variables, was regressed on the dependent variable, the interaction did not have a significant effect on the dependent variable. The model R^2 of .004 indicated that the interaction effect of Neuroticism and Selflessness explained .04% of variance on Military Identity. The coefficient results indicated that the interaction effect of Neuroticism and Selflessness has a negative impact on Military Identity (ß = -.067; t = -.971; p > .05), thereby the moderating effect of Selflessness on the effect of Neuroticism on Military Identity was not corroborated.

Table 4.43

Linear regression analysis results of the effect of Neuroticism on Military Identity with Selflessness as a moderator

Model summary				
Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.067[a]	.004	.000	.86701

a. Predictors: (Constant), NEURO_ SLFLSNS

Model summary				
Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	.067[a]	.004	.000	.86701

a. Predictors: (Constant), NEURO_ SLFLSNS

Coefficients[a]

		Unstandardised coefficients		Standardised coefficients		
Model		ß	Std. error	Beta	t	Sig.
1	(Constant)	5.500	.174		31.624	.000
	NEU_SEL	-.025	.026	-.067	-.971	.333

a. Dependent variable: MILID

4.10 CHAPTER SUMMARY

This chapter presented and discussed an overview of the analyses and procedures conducted on the data. Item and dimensionality analyses were performed to assess the psychometric properties of each scale used in this study. The psychometric properties assessment ensured sufficient internal consistency and the unidimensionality of each scale before CFA could be performed. Highly satisfactory internal consistency and unidimensionality were achieved, although the procedures led to the elimination of some items that were found to be weak in some measurement scales. CFA was also conducted on the measurement model to ensure that a sufficient model fit was achieved before the data could be fitted into the structural model. A measurement fit was achieved with limited modification on the model itself. The proposed structural model was then fitted into the data. The GFIs derived from the structural model fit also showed a reasonably satisfactory model fit.

CHAPTER 5:
DISCUSSION, CONCLUSIONS, AND
RECOMMENDATIONS

5.1   INTRODUCTION

The previous chapters focused on the introduction of the research problem and the literature on the variables of this study. The review of the existing literature culminated in the formulation of hypotheses that were geared towards answering the overarching research question. The overarching substantive research hypotheses and the subsequent path-specific substantive research hypotheses presented in Chapter 3 were tested using SEM, as well as multiple regression and correlation analyses. The results were presented in Chapter 4 and are discussed in this chapter. This chapter also presents a summary of the findings, the conclusions of the study, the managerial implications of the research findings, the limitations of the study, and recommendations for future research.

5.2   AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to answer the following questions: To what extent does Conscientiousness, Openness to Experience, and Neuroticism have an effect on Military Identity, and to what extent does Selflessness have a moderating effect on the relationship between Conscientiousness, Openness to Experience and Neuroticism and Military Identity?

5.2.1   Research objectives

The study sought to achieve the following primary objective:

- To investigate the effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity and the moderating role of Selflessness in these relationships in a South African military university.

The study sought to achieve the following secondary objectives:

- To establish if Conscientiousness has a significant positive effect on Military Identity.

- To establish if Openness to Experience has a significant positive effect on Military Identity.

- To establish if Neuroticism has a significant negative effect on Military Identity.

- To establish whether Selflessness moderates the effect of Conscientiousness on Military Identity.

- To establish whether Selflessness moderates the effect of Openness to Experience on Military Identity.
- To establish whether Selflessness moderates the effect of Neuroticism on Military Identity.

5.3   SUMMARY OF THE FINDINGS

This study firstly aimed to ensure that the measurement scales utilised in this research to assess the relationships among the variables of the study were construct valid and reliable. It was necessary to establish the validity and reliability of the measurement scales to ensure that the best possible statistical results would be attained when further analyses were performed. Before determining the fit of the measurement and structural models, item analysis and EFA were performed on the measures used in the study. The main purpose of conducting item analysis was to determine the reliability coefficients/internal consistency of the item scales, as well as to identify items that were not correlating well with the other items in the scales before combining items into linear composites to represent the latent variables when fitting the proposed model to the data. This was accomplished using the item statistics estimates provided as part of the output from the reliability analysis procedure available in SPSS version 27.

5.3.1   Conclusions regarding reliability analysis

A Cronbach's alpha of $\alpha = .820$ was obtained for the Conscientiousness subscale, which is regarded as good (Gliem & Gliem, 2003; Pallant, 2016). The corrected item-total correlation values were all larger than .30, which is regarded as acceptable and indicates that they all measured the same construct and the items warrants retention. This finding corroborates a number of studies that found almost similar Cronbach's alphas. For example, Bangor (2008) found $\alpha = .78$, Bonnet (2002) $\alpha = 98$, and Lewis and Zettlemoyer (2017) $\alpha = .89$, which are all supported by the results of this study.

Table 5.1

Measurement scale reliability test

Scale	No. of factors	Cronbach's alpha	Total-item correlations
Conscientiousness	9	.820	.459-.658
Openness to Experience	8	.738	.220-.524
Neuroticism	8	.771	.377-582
Selflessness	12	.757	.315-525

Idealism	11	.692	.192-519
Professionalism	12	.818	.249-628
Individualism	8	.645	.223-.503

A Cronbach's alpha coefficient of α = .738 was obtained for the Openness to Experience subscale, which is considered as acceptable (Gliem & Gliem, 2003; Pallant, 2016), after deleting two items, namely BFI41 and BFI35R, which had corrected item-total correlations below the acceptable threshold of .30 (Pallant, 2016). Item BF144, with a corrected item-total correlation value of .220, was flagged. Corrected item-total correlation values suggested slight to marked relationships among the Openness to Experience items. This finding corroborates several studies that found almost similar Cronbach's alphas. For example, Tyler (1993) found α = .63 and, after deleting two items, α = .75; and Bonnet (2002) found α = .61, and after deleting two items, α = .78, which are supported by the results of this study.

A Cronbach's alpha coefficient of α = .771 was obtained for the Neuroticism subscale, which is considered acceptable (Gliem & Gliem, 2003; Pallant, 2016). All the corrected item-total correlations were larger than .30, which depicted that they all measured the same construct and all the items warranted retention. This finding corroborates a number of studies that found almost similar Cronbach's alphas. For example, Woo and Ahn (2015) found α = .74, Mahmood and Moazzam (2021) found α = .76, and Hamzagić (2018) found α = .79, which are all supported by the results of this study.

A Cronbach's alpha coefficient of α = .757 was obtained for the Selflessness scale, after deleting items SS6R, SS8R, and SS14R, which had corrected item-total correlations below the acceptable threshold of .30 and an unacceptable negative sign (Pallant, 2016). Corrected item-total correlation values suggested slight to marked relationships among the Selflessness items. This finding corroborates several studies that found almost similar Cronbach's alphas. For example, Oakes (2011) found α = .60 and, after deleting two items, α = .78; and Cho and Kim (2015) found α = .621 and, after deleting two items, α = .76, which are supported by the results of this study.

The Cronbach's alpha observed for the Idealism scale was .692, which is deemed not satisfactory but usable (Pallant, 2016). The corrected item-total correlations for NPIS(I)5 and NPIS(I)11 were less than .30. If these items were deleted, the alpha level would increase to .696. It was decided to retain these items. This finding corroborates several studies that found

almost similar Cronbach's alphas. For example, Kiwan et al. (2000) found α = .681, Dingwall et al. (2017) found α = .685, and Abedi (2002) found α = .696, which are all supported by the results of this study.

An internal consistency reliability Cronbach's alpha coefficient of α = .818 was obtained for the Professionalism scale, which was acceptable (Gliem & Gliem, 2003; Pallant, 2016). One of the corrected item-total correlations was less than .30, which indicated that they all measured the same construct and all the items warranted retention. None of the items would result in an increase in alpha if deleted. This finding corroborates several studies that found almost similar Cronbach's alphas. For example, Breivik et al. (2019) found α = .820, Carver and Connor-Smith (2010) found α = .819, and Friedman (2015) found α = .802, which are all supported by the results of this study.

A reliability Cronbach's alpha coefficient of α = .645 was obtained for the Individualism scale after deleting items NPISIN9R and NPISIN6R, which had a corrected item-total correlation that was less than the acceptable threshold of .30, and had a negative sign (Pallant, 2016). This finding corroborates several studies that found almost similar Cronbach's alphas. For example, Bahardoost and Ahmadi (2018) found α = .620, Coetzee (2013) found α = .632, and Friedman (2015) found α = .646, which are all supported by the results of this study.

5.3.2   Conclusions regarding exploratory factor analysis (EFA)

The dimensionality analysis of the Conscientiousness subscale returned a KMO measure of sampling adequacy value of .847 and a Bartlett's test of sphericity statistic value of 443.926 (df = 28; p = .000), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 57.257% variance of the factor, which was supported by the scree plot, which also suggested that a single factor should be extracted.

Table 5.2

CVSCALE factor loadings

Scale	No. of items	Factor loadings	% of variance explained
Conscientiousness	8	.17-.67	57
Openness to Experience	4	.54-.78	51
Neuroticism	8	.15-.69	53

Selflessness	9	-.00-.72	59
Idealism	7	-.01-.67	57
Professionalism	9	-.02-.77	69
Individualism	5	-.13-.70	59

The dimensionality analysis of the Openness to Experience subscale returned a KMO measure of sampling adequacy value of .715 and a Bartlett's test of sphericity statistic value of 127.600 (df = 6; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Only one factor with an eigenvalue greater than 1 was obtained, which explained 51% variance of the factor, which was supported be the scree plot, which also suggested that a single factor should be extracted. The solution could not be rotated.

The dimensionality analysis of the Neuroticism subscale returned a KMO measure of sampling adequacy value of .817 and a Bartlett's test of sphericity statistic value of 353.150 (df = 28; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 53.14% variance of the factor. The scree plot also suggested that two factors should be extracted.

The dimensionality analysis of the Selflessness subscale returned a KMO measure of sampling adequacy value of .654 and a Bartlett's test of sphericity statistic value of 335.064 (df = 36; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Three factors with an eigenvalue greater than 1 were obtained, which explained 59.49% variance of the factor. The scree plot also suggested that a single factor should be extracted.

The dimensionality analysis of the Idealism subscale returned a KMO measure of sampling adequacy value of .694 and the Bartlett's test of sphericity statistic value of 288.445 (df = 21; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which

explained 56.58% variance of the factor, which was supported by the scree plot, which also suggested that two factors should be extracted.

The dimensionality analysis of the Professionalism subscale returned a KMO measure of sampling adequacy value of .746 and a Bartlett's test of sphericity statistic value of 639.571 (df = 36; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Three factors with an eigenvalue greater than 1 were obtained, which explained 69.24% variance of the factor. The scree plot also suggested that three factors should be extracted.

The dimensionality analysis of the Individualism subscale returned a KMO measure of sampling adequacy value of .521 and a Bartlett's test of sphericity statistic value of 87.447 (df = 10; p = .00), which allowed for the identity matrix null hypothesis to be rejected. There was therefore sufficient evidence that the correlation matrix was factor analysable (Kaiser as cited in Pallant, 2016). Two factors with an eigenvalue greater than 1 were obtained, which explained 58.92% variance of the factor. The scree plot also suggested that two factors should be extracted.

5.3.3   Conclusions regarding CFA

CFA was performed on the items of the revised Conscientiousness scale. Careful inspection of the theta-delta modification indices resulted in the deletion of item BFI38. Further CFA was conducted with the remaining items. LISREL 8.80 also explicitly tested the null hypothesis of close fit. The null hypothesis of close model fit (H_{02}: RMSEA ≤ .05) was rejected at a 5% significance level (p < .05), with a p-value for test of model fit of .82, which failed to provide evidence of close fit of the model. The RMSR of .044 indicated a good fit; the standardised RMSR value of .031 was also indicative of a good model fit (< .05) level. The revised Conscientiousness scale measurement model achieved NNFI (1.00), CFI (1.00), IFI (1.0) NFI (.98), RFI (.97), and GFI (.98), which exceeded the .90 threshold and thus depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices therefore seemed to portray a positive picture of model fit.

Table 5.3

Summary of CFA goodness of fit statistics of the scale measurement models

Scale	RMSEA	P-value close fit	RMSR	NNFI	CFI	IFI	GFI	NFI	RFI
Conscientiousness	.006	.82	.031	.98	1.0	1.00	.98	.98	.97
Openness to Experience	.047	.40	.031	.98	.99	.99	.98	.98	.95
Neuroticism	.035	.66	.038	.99	.99	.99	.98	.96	.94
Selflessness	.078	.00	.078	.89	.90	.90	.78	.83	.81
Idealism	.068	.23	.038	.92	.96	.96	.97	.92	.85
Professionalism	.075	.19	.038	.94	.97	.98	.98	.96	.89
Individualism	.050	.42	.067	.94	.98	.98	.98	.94	.84

CFA was also performed on the items of the revised Openness to Experience scale. Careful inspection of the theta-delta modification indices resulted in the deletion of items BFI25, BFI30, BFI40, and BFI44. Further CFA was conducted with the remaining items. An examination of the GFIs indicated that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .047 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.00; .15) was .15, which confirmed a poor model fit. The null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .11 indicated a mediocre fit; the standardised RMSR value of .039, which was well below the cut-off value (< .05), further confirmed the good model fit level. The revised Openness to Experience scale measurement model achieved NNFI (.98), CFI (.99), IFI (.99), NFI (.98), RFI (.95), and GFI (.97), which all exceeded the .90 threshold and depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

CFA was also performed on the items of the revised Neuroticism scale. Careful inspection of the theta-delta modification indices resulted in the deletion of item BFI14. Further CFA was conducted with the remaining items. An examination of the GFIs indicated that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .035 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.00; .081) was .081, which confirmed acceptable model fit. The null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .052 indicated a mediocre fit; the

standardised RMSR value of .038, which was well below the cut-off value (< .05), further confirmed the good model fit. The revised Neuroticism scale measurement model achieved NNFI (.99), CFI (.99), IFI (.99), NFI (.96), RFI (.94), and GFI (.98), all exceeding .90 thresholds, which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

CFA was also performed on the items of the revised Professionalism scale. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(P)1, NPIS(P)6, NPIS(P)7, NPIS(P)8, NPIS(P)9, and NPIS(P)12. Further CFA was conducted with the remaining items. An examination of the GFIs indicated that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .075 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.014; .13) was .13, which confirmed mediocre fit. The null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .091 indicated a mediocre fit; the standardised RMSR value of .038, which was well below the cut-off value (< .05), further confirmed the good model fit level. The revised Professionalism scale measurement model achieved NNFI (.94), CFI (.97), IFI (.98), NFI (.96), RFI (.89), and GFI (.98), all exceeding .90 thresholds, with the exception of RFI (.89), which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

CFA was also performed on the items of the revised Idealism scale. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(I)1, NPIS(I)2, NPIS(I)3, NPIS(I)5, and NPIS(I)7. Further CFA was conducted with the remaining items. An examination of the GFIs indicated that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .068 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (.010; .12) was .12, which confirmed mediocre fit. The null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .15 indicated a mediocre fit; the standardised RMSR value of .053, which was just above the cut-off value (< .05), further confirmed the good model fit level. The revised Idealism scale measurement model achieved NNFI (.92), CFI (.96), IFI (.96), NFI (.92), RFI (.85), and GFI (.97), all exceeding .90 thresholds, with the exception of RFI (.85), which depicted a good fit (Diamantopoulos &

Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

CFA was also performed on the items of the revised Individualism scale. Careful inspection of the theta-delta modification indices resulted in the deletion of items NPIS(IN)3, NPIS(IN)7, NPIS(IN)8, and NPIS(IN)10. Further CFA was conducted with the remaining items. An examination of the GFIs indicated that the model achieved good model fit (Diamantopoulos & Siguaw, 2000). A sample RMSEA value of .050 indicated a good fit (Diamantopoulos & Siguaw, 2000). The upper bound of the 90% confidence interval for RMSEA (0.0; .12) was .12, which confirmed mediocre fit. The null hypothesis of close model fit (RMSEA ≤ .05) was not rejected at a 5% significance level (p < .05), which indicated a good fit. The RMSR of .20 indicated a mediocre fit; the standardised RMSR value of .067, which was just above the cut-off value (< .05), further confirmed the good model fit level. The revised Individualism scale measurement model achieved NNFI (.94), CFI (.98), IFI (.98), NFI (.94), RFI (.84), and GFI (.98), all exceeding .90 thresholds, with the exception of RFI (.84), which depicted a good fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). These relative indices seemed to portray a very positive picture of model fit.

5.4   DESCRIPTIVE RESULTS

The descriptive results indicate that, in general, the participants of the study had above-average perceptions of Military Identity (mean = 5.34; SD = .866). Although the perceptions of Military Identity were just above average, they were not high, which is expected (Johansen et al., 2013). The importance of Military Identity in the military is that it helps to instil discipline and ensures that military practitioners cooperate in teamwork, are obedient, and respect orders.

This result supports the findings of Soeters et al. (2006), who found high levels of Military Identity among military practitioners in India. This study also supports a study by Lien et al. (2021), which found high levels of Military Identity among Norwegian military veterans. Bonnie et al. (2022) also found high levels of Military Identity among United States Army reserves and National Guard soldiers. Nonetheless, the results imply room for improvement in the perceptions of Military Identity among the participants of the study.

The results also indicated that the participants had above-average perceptions/levels for Conscientiousness (mean = 3.71, SD = .782). A study by Hampson et al. (2000) on the role of in-group identification and status also had above-average levels of Conscientiousness. A study by Hashim et al. (2017) on the relationship between the Big Five personality factors and OCB also found above-average levels of Conscientiousness. Brown et al. (2006) also found above-average levels of Conscientiousness in a study on organisational identity. The results imply that there is still much room for improvement in the perception levels of Conscientiousness among participants of the study.

The results indicated that the participants had above-average perceptions/levels for Openness to Experience (mean = 3.91; SD = .723). Hashim et al. (2017) found an above-average perception level in Openness to Experience in a study that examined the relationship between Big Five personality factors and OCB. An above-average perception level of Openness to Experience was found by Hough and Ones (2001) in a study on personality and job performance. Johansen et al. (2013) also found above-average perception levels of Openness to Experience in a study on the Military Identity of Norwegian soldiers. The result of this study implies that there is still room for improvement in the perception levels of Openness to Experience among the participants.

The results for Neuroticism (mean = 2.48; SD = .742) indicated an above-average perception level of Neuroticism. Hashim et al. (2017) also found an above-average perception level in Neuroticism in a study that examined the relationship between Big Five personality factors and OCB. Brown et al. (2006) also found above-average levels of Neuroticism in a study on organisational identity. John and Srivastava (1999) found above-average levels of Neuroticism in their study on the Big Five personality traits. The result of this study implies that there is still much room for improvement in the perception levels of Neuroticism among participants.

The results for Selflessness (mean = 2.5; SD = .422) indicated an above-average perception level. Neff (2003) found above-average levels of Selflessness in a study on self-compassion and a healthy attitude towards oneself. An above-average level of Selflessness was also found by Dambrun (2017) in a study on self-centredness and Selflessness. Furthermore, Dambrun and Richard (2011) found and above-average level of Selflessness in their study of self-based

psychological functioning and its consequences for happiness. The result of this study implies that there is still much room for improvement in the perception levels of Selflessness among the participants.

5.5   ASSESSMENT OF MODEL FIT

This section presents the fit of the measurement and structural models, as well as the paths of the structural models, to test the hypotheses of the study.

5.5.1   Measurement model

The measurement model fit assessed the extent to which a hypothesised model fit the data and provided information on the validities and reliabilities of the observed indicators. The LISREL program also tested the null hypothesis of close fit (H_{01}: RMSEA ≤ .05) by calculating the conditional probability under the assumption that H_0: RMSEA < .05 was true in the population.

Having deleted a number of suspect or unstable items for each scale through item analysis, EFA, and CFA, the decision was made to use the remaining individual items instead of item parcels. An RMSEA value of .078 indicated a reasonable fit (Diamantopoulos & Siguaw, 2000). The 90% confidence interval for RMSEA lower bound in this case indicated a good fit since it was .070. NNFI = .89, CFI = .90, RFI = .81, GFI = .78 all indicated acceptable fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). The study thus proceeded with the estimation of structural models to test the hypotheses.

5.6   DISCUSSION OF STRUCTURAL MODEL AND HYPOTHESES

The structural model also used the stable valid items that remained after deletion through item analysis, EFA, and CFA. The fit indices for CFA for the revised structural equation model are presented as follows. An RMSEA value of .078 indicated a reasonable fit (Diamantopoulos & Siguaw, 2000). The 90% confidence interval for RMSEA lower bound in this case indicated a good fit since it was .070. GFI = 0.79 indicated an acceptable fit. NNFI = .89, CFI = .90, and RFI = .82 indicated reasonable fit (Diamantopoulos & Siguaw, 2000; Hair et al., 2010). This study used unstandardised parameter estimates to evaluate the strength of the estimated path coefficients that expressed the significance of exogenous latent variables on endogenous latent variables and the significance of endogenous latent variables on

endogenous latent variables. Gamma and beta parameters were significant based on one-tailed tests if t > 1.65 and p < .05.

The findings on the hypotheses are discussed below. The following section examines testing of Hypotheses 1 to 6.

5.6.1 Hypothesis 1: Conscientiousness has a positive significant effect on Military Identity

LISREL SEM results indicated that the path from Conscientiousness to Military Identity was negative and not significant (γ = -0.38, t-value = -1.42, p < .05). A negative effect of Conscientiousness on Military Identity is therefore evident. The relationship hypothesised between Conscientiousness and Military Identity in the structural model is contradicted. Therefore, hypothesis 1, which states that Conscientiousness has a positive significant effect on Military Identity is not substantiated. Furthermore, the sign of this significant parameter estimate is not consistent with the hypothesised nature of the relationship between those latent variables. This result was not expected to be a negative, rather positive significant results between these variables were expected.

It was expected that the results of this study were going to support theory, which points that an individual high on Conscientiousness is high on achievement orientated, has the capacity to work hard and meet challenges, reflects a more interpersonal component of Conscientiousness that manifests in traits of responsibility and dutifulness (Hough & Ones, 2001). Individuals serving in the armed forces are generally responsible and dutiful, as indicated in the Code of Conduct for uniformed members of the SANDF. This is especially essential in a mission area where the individual is faced with a dilemma to kill to achieve the objectives of the mission. It was expected that the results would support Salgado's (1998) research, which found that Conscientiousness and diligence are important predictors of Military Identity. Also, the results were expected to support Barrick and Mount (1991) who indicated that individuals who score high in Conscientiousness tend to be dependable, careful, thorough, responsible, organised, and resourceful, the common values of military practitioners.

Military Identity is associated with the armed forces' prevailing goals, values, and tasks, representing the degree to which soldiers and officers are motivated and willing to internalise these and establishing important organisational behaviours such as compliance, extra-role

pro-organisational behaviour, loyalty, improved performance, reduced absenteeism, and higher levels of physical and emotional wellbeing (Barrick & Mount, 1991). Military professionalism enables the military to be effective in its undertakings. Professionalism entails excellent literacy and practical skills connected to the military, as well as high ethical standards, reasonable work motivation, good morale, and good relationships with colleagues. The concept of professionalism is closely related to competence. All these elements appear fundamental to the functioning of the armed forces; thus, linking Military Identity to both the SIT and Conscientiousness.

As indicated by Johansen et al. (2013), it would be expected that an individual who is high on Conscientiousness would also highly identify with the military organisation because there is a relationship between Military Identity and areas of individual performance (compliance with orders, hardworking, and meeting challenges and Conscientiousness which are typical military values. These authors also found that professionalism positively predicted perceived military competence and skills. Furthermore, in their study of junior officer candidates, they also found that professionalism positively explained overall military performance.

On the one hand and unexpected, this result corroborates the findings of a study by Barrick and Mount (1991) which found a negative correlation between Conscientiousness and Military Identity. Such findings were explained by that young adults who are low on Conscientiousness are more likely to join the military and exhibit low Military Identity. Furthermore, the result of this study support Gualinga and Lennartsson (2020) who found that there was no significant correlation (r = 0.13) between conscientiousness and organisational identity in their study.

On the other hand, this result contradicts Johansen et al. (2013) who found that there is a relationship between Military Identity and dimensions of Conscientiousness (compliance with orders, hardworking, meet challenges) in their study of officer cadets at the war academies. Rather, soldiers with a high degree of conscientiousness are more likely to identify with the military than soldiers with low degree of conscientiousness. This result also contradicts a study by Ajzen et al. (2009) who found a strong positive relationship between conscientiousness and organisational identity (r=. 70, p< .05). Furthermore, the results of Aboul-Ela (2019) are also in contradiction with the results of this study, which found a significant correlation between conscientiousness and organisational identity (r= .71) in her

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study of uncovering the Big Five Model personality traits and organisation identification. The result of this study is also in contradiction with a study by Bobdey et al. (2021) on cadets in the Indian Armed Forces examining the effect of personality traits on performance in the military, a strong correlation between Officer like qualities and need for achievement (p=0.019), self-discipline (p=0.043), and deliberateness (p=0.039) was found, which are all dimensions of conscientiousness. Mahmood and Moazzam (2021) found a positive correlation between Organisational Identification and the Conscientiousness trait (β = .375, t = 13.707, p = .000) on investigating the relationship between personality traits and personal identification in an organisation. The results of Mahmood and Moazzam (2021) is in contradiction to the findings of this study.

The findings of this study can be explained in terms of mismatch between the workplace situation and individual personalities. In the SANDF the mismatch between personalities of individuals and the values of the Military can be explained in terms of the high youth unemployment rate in South Africa. The SANDF has to make a contribution to providing employment in terms of the government's youth unemployment plan with the aim of eliminating poverty and reducing inequality. This contribution is made through the Military Skills Development Programme, as a result, thousands of young men and women join the forces merely for employment, thereby, with a low match or fit between individual values and the values of the organisation. Lastly, other technical problems like the sensitivity of LISREL software could have contributed to this unexpected result.

5.6.2 Hypothesis 2: Openness to Experience has a positive significant effect on Military Identity

The results indicate that the path from Openness to Experience to Military Identity is negative significant (γ = -0.25, t-value = -1.13, p < .05). A negative relationship between Openness to Experience and Military Identity is therefore evident. The relationship hypothesised between Openness to Experience and Military Identity in the structural model is contradicted. Therefore, hypothesis 2, which states that openness to Experience has a positive significant effect on military identity is not substantiated. Furthermore, the sign of this significant parameter estimate is not consistent with the hypothesised nature of the relationship between those latent variables. This result implies that the higher an individual is on

Openness to Experience, the lower he or she will score on Military Identity, and vice-versa. This result was highly unexpected.

Based on the evidence stated in the empirical literature review of this study, there is a positive and significant relationship between aspects of Openness to Experience and characteristics of an individual that identify with the military such as getting out of your comfort zone, willingness to take risk and learn new skills, stepping into the unknown, and excepting that an opinion can be wrong.

This result does not support theory and expectation. As indicated earlier, military practitioners are expected to be high on Openness to Experience, which should explain a significant effect on Military Identity. In fact, McCrae and Costa (2003) posit that a person with a high level of Openness to Experience will often enjoy venturing beyond their comfort zone and seek out new, unconventional, and unfamiliar experiences, travel to new destinations, and embrace different cultures and practices. Thomas et al. (2012) mention that people with high Openness to Experience are highly creative, they like to pay attention to detail, and prefer to do everything perfectly, are intuitive and imaginative and can identify the artistic aspect of things and situations. Individuals who are open to experience have a great of attachment to nature, have unique thinking and a versatile approach to life, and do not fear stepping into the unknown. McCrea and Costa (2003) suggest that those open to experience get bored of routines and tight schedules and are flexible and willing to accept that their opinions can be wrong. These authors also suggest that those who are open to experience can adjust easily and contribute well to the workplace and have a flexible attitude.

Regarding Military Identity, Thomas et al. (2012) point that soldiers are often required to learn new tasks or skills very quickly, whereas people in civilian life may be required to learn these skills in six months or more. A good soldier is thus regarded as an individual who is able to learn new skills and tasks in a short space of time. As reported by Thomas et al. (2012), the nature of military operations often requires soldiers to travel to new destinations, learn new cultures, and to do things that take them out of their comfort zone. Soldiers who are open to experience often prefer to take part in missions that will allow them to get out of their comfort zone, take risks, and step into the unknown. Furthermore, Thomas et al. (2012) state that a soldier who is flexible and accept that their opinion can be wrong can identify with the military. It would then be expected that an individual with high Openness to Experience would

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also highly identify with the military organisation. This is because, based on the facts stated above, there is a relationship between aspects of Openness to Experience and characteristics of an individual who identifies with the military such as getting out of your comfort zone, willingness to take risks and learn new skills, stepping into the unknown, and excepting that an opinion can be wrong.

However, the findings of this study are in contradiction with the results of this study. A study by Hoffman and Woehr (2006) found an above-average positive significant correlation between organisational identity and Openness to Experience (r=.65). Also, an above-average correlation was found among openness to experience, and Military Identity in a study conducted by Thomas et al. (2012) on German Military personnel (r=.64, p<.05). As alluded to earlier, exploring new experiences is one of the factors that are important when considering if an individual identifies with the military. In a study conducted by Xu et al (2016) on 225 working professionals during their participation in a part-time masters degree program in an Irish Business School, they found a positive relationship between creativity and openness to experience (r= .14; p < .001) this is also in contradiction with the results of this study. These are dimensions of Openness to change.

Furthermore, the result of this study is also in disagreement with the results of Mahmood and Moazzam (2021) who found a significant positive association between openness and organisational identification (β = .092, t = 4.953, p = .000) on investigating the relationship between personality traits and personal identification in an organisation.

The findings of this study can be explained in terms of the growing mismatch between individual values and organisational values created by a number of factors. These factors include unemployment and conventional bureaucracy. The high unemployment rate is South Africa results in the youth joining the military for better employment opportunities, as a result there is a mismatch between individual personality and organisational demands and needs. In the SANDF there are numerous mismatches in some of these dimensions outlined by Kalleberg (2007) which could explain the reason for the unexpected results of this study. Also, LISREL programme sensitivity could have contributed to the poor result regarding these two variables.

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5.6.3 Hypothesis 3: Neuroticism has a negative and significant effect on Military Identity

The results indicate that the path from neuroticism to military identity is negative and significant (γ = -.25, t-value = -2.19, p < .05). A negative significant relationship between neuroticism and military identity is therefore evident. The relationship hypothesised between neuroticism and military identity in the structural model is not corroborated because of non-significance. Therefore, hypothesis 3 which states that Neuroticism has a negative and significant effect on Military Identity is not substantiated. The sign of this significant parameter estimate is consistent with the hypothesised nature of the relationship between these latent variables.

The results mean that high level of Neuroticism is related to low level of Military Identity, but the relationship is not significant. As indicated by Johansen et al. (2013), individuals that cannot focus on the task at hand for a lengthy period while filtering distractions do not identify with the military.

These results support a study by Aghaz and Hashemi (2014) on investigating the impact of personality traits on expanded model of organisational identification, the results showed that neuroticism has a negative nonsignificant relationship with organisational identification (r=-.03, p<.001). Furthermore, a study conducted by Tett et al. (1991) on Norwegian Military personnel found a negligible correlation between neuroticism and Military Identity (r=.01, p<.001). The results of this study contradict a study by Aboul-Ela (2018) on uncovering the Big Five model personality traits and organisational identification on subjects in Egypt which found an above-average significant relationship between Neuroticism and Organisational Identity (r=.698) were found. The study by Aghaz and Hashemi (2014) is corroborated by the results of this study on investigating the impact of personality traits on expanded model of organisational identification, the results show that neuroticism has a nonsignificant negative relationship with organisational identification (r=.03, p<.001).

The results of this study corroborate a study by Bobdey et al. (2021) on cadets in the Indian Armed Forces that examined the effect of personality traits on performance in the military which found that worry (p=.599), Frustration (p=0.331), and sensitivity to stress (p=0.162) had a negative significant correlations with Officer-like qualities. These are dimensions of Neuroticism. Furthermore, the results of this study further corroborate the results of Mahmood and Moazzam (2021) who found that the relation between neuroticism trait and

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organisational identification was also significant and negative (β = -0.163, t = -8.149, p = .000) on investigating the relationship between personality traits and personal identification in an organisation. The results could be explained by the nature of the sample, which happens to be relatively young compared to typical military units.

5.6.4 Hypothesis 4: Selflessness has a moderating effect on the relationship between Conscientiousness and Military Identity

The results indicate that when the interaction effect of Conscientiousness and Selflessness was regressed on the dependant variable, the interaction effect has a significant effect on the dependant variable. The model R^2 of .132 indicates that the interactions effect explains 13.2% of variance on Military Identity. Coefficient results indicate that interaction effect has a significant positive effect on Military Identity (b = .363, t = 5.649, p < .05). Therefore, hypothesis 4, which states that Selflessness has a moderating effect on the relationship between Conscientiousness and Military Identity was substantiated.

According to this result, Selflessness moderates the relationship between Conscientiousness and Military Identity. The R^2 (.155) multiple regression result of the three independent variables, i.e. Conscientiousness, Openness to Experience and Neuroticism plus the moderator, i.e. Selflessness indicated that these variables explained 15.5% of variance on Military Identity, whereas the R^2 of the interaction effect of Conscientiousness and Selflessness was .132, indicating that factoring Selflessness into Consciousness explains 13.2% of variance on Military Identity, a variance very close to all the four variables combined. This reflects the big role that Selflessness plays in increasing the effect of Conscientiousness on Military Identity. Put the other way, the results indicate that Conscientiousness has a slightly significance on Military Identity, but this effect increases for individuals that are high on Selflessness.

Selfless in a very important factor in the military. These results support the findings of Donia et al. (2016) on servant leadership and employee outcomes with the moderating role of subordinate's motives, it was found that the relationship of servant leadership with job satisfaction was stronger among employees with low impression management motives (β = .70, p < .001) as, compared to when impression management motives were high (β = .60, p < .001). The results also shows that servant leadership and Organisational Citizenship behaviour (OCB) were significantly negatively correlated when subordinates had low prosocial values

(self-centeredness) (β = −.25, p < .05), but the relationship was not significant when subordinate had high prosocial values (Selflessness) (β = −.01, n.s.). Impression management motives can be the same as Selflessness or self-centeredness depending on the level of impression management motives. Servant leadership is a form of personality trait and job satisfaction is an organisational outcome like Military Identity. The study of Donia et al. (2016) is a reflection of how different levels of Selflessness moderate the relationship between personality traits and organisational outcomes like Military Identity.

Furthermore, a longitudinal study by Wegener (2020) on early childcare and youth development, that collected data on a cohort of children and their families between 1991 and 2018 in the United States found that the direct effects were nearly unchanged for self-transcendence (β = −0.46, p < 0.001), perspective-taking (β = 0.09, p < 0.003) and materialism (β = 0.09, p = 0.003). None of the coefficients for the interaction terms were statistically significant in the moderating role of selflessness in the relationships between the self-structure predictors and neuroticism. Employees who are driven by altruism will assist others even if it costs them themselves. They run the risk of burning out as a result (Dambrun, 2017).

5.6.5 Hypothesis 5: Selflessness has a moderating effect on the relationship between Openness to Experience and Military Identity

The results indicate that when the interaction effect of Openness to Experience and Selflessness was regressed on the dependant variable, the interaction effect has a significant effect on the dependant variable. The model R^2 of .109 indicates that the interactions effect explains 10.9% of variance on Military Identity. Coefficient results indicate that interaction effect has a significant positive effect on Military Identity (b = .363, t = 5.649, p < .05). Therefore, hypothesis 5, which states that Selflessness has a moderating effect on the effect of Openness to Experience and Military Identity is substantiated.

According to this result, Selflessness moderates the relationship between Openness to Experience and Military Identity. The R^2 (.155) multiple regression result of the three independent variables, i.e. Conscientiousness, Openness to Experience and Neuroticism plus the moderator, i.e. Selflessness indicated that these variables explained 15.5% of variance on Military Identity, whereas the R^2 of the interaction effect of Openness to Experience and Selflessness was .105, indicating that factoring Selflessness into Openness to Experience explains 10.5% of variance on Military Identity, a variance very close to all the four variables

combined. This reflects the big role that Selflessness plays in increasing the effect of Openness to Experience on Military Identity. Put the other way, the results indicate that Openness to Experience has a slightly significance on Military Identity, but this effect increases for individuals that are high on Selflessness.

This result further underscores the importance of Selflessness in the military and supports the findings of Donia et al. (2016) on servant leadership and employee outcomes with the moderating role of subordinate's motives which found that the relationship of servant leadership with job satisfaction was stronger among employees with low impression management motives (β = .70, p < .001) as, compared to when impression management motives were high (β = .60, p < .001). The results also shows that servant leadership and Organisational Citizenship behaviour (OCB) were significantly negatively correlated when subordinates had low prosocial values (self-centeredness) (β = −.25, p < .05), but the relationship was not significant when subordinate had high prosocial values (Selflessness) (β = −.01, n.s.). Impression management motives can be the same as Selflessness or self-centeredness depending on the level of impression management motives. Servant leadership is a form of personality trait and job satisfaction is an organisational outcome like Military Identity.

Furthermore, the results also support the findings of Dambrun (2017) on Selflessness, self-centeredness, and durable happiness on a sample of adults in France, it was found that Selflessness was positively and significantly related to authentic–durable happiness (β = .36, p < .001), but not to fluctuating happiness (β = − .07, p > .28). When self-centeredness was statistically controlled for, the relationship between selflessness and authentic-durable happiness remained significant (β = .37, p < .001). Self-centeredness was significantly related to both fluctuating happiness (β = .36, p < .001) and authentic–durable happiness (β = − .17, p < .01). When Selflessness was statistically controlled for, the relationship between self-centeredness and authentic–durable happiness vanished (β = − .08, p > .18), and the relationship between self-centeredness and fluctuating happiness still remained significant (β = .33, p < .001). Self-centeredness and Selflessness were significantly and negatively correlated (β = − .25, p < .001).

5.6.6 Hypothesis 6: Selflessness has a moderating effect on the relationship between Neuroticism and Military Identity

The results indicate that when the interaction effect of Neuroticism and Selflessness was regressed on the dependant variable, the interaction effect has a significant effect on the dependent variable. The model R^2 of .004 indicates that the interaction effect has a non-significant negative effect on Military Identity (b = -.067, t = -.971, p > .05). Therefore, hypothesis 6, which states that Selflessness has a moderating effect on the relationship between Neuroticism and Military Identity, is not substantiated.

According to this result, Selflessness does not moderate the relationship between Neuroticism and Military Identity. The R^2 (.155) multiple regression result of the three independent variables, i.e., Conscientiousness, Openness to Experience and Neuroticism plus the moderator, i.e., Selflessness, indicated that these variables explained 15.5% of variance on Military Identity, whereas the R^2 of the interaction effect of Neuroticism and Selflessness was .004, indicating that factoring Selflessness into Neuroticism explains a meagre .04% of variance on Military Identity. The result obviously indicates that factoring in Selflessness in Neuroticism does not increase the effect of Neuroticism on Military Identity.

It was expected that Selflessness would decrease the negative effect of Neuroticism on Military Identity. This would have been evident if the negative effect of Neuroticism on would have been significantly ameliorated by Selflessness. The moderation results of Selflessness on the effect of Neuroticism on Military identity did not support this expectation, resulting in the acceptance of the null hypothesis, which indicated that Selflessness does not moderate the effect of Neuroticism on Military Identity and the rejection of the alternate hypothesis which proposed that Selflessness moderates the effect of Neuroticism on Military Identity.

This result supports the findings of Wegener (2020) on early child care and youth development, that collected data on a cohort of children and their families between 1991 and 2018 in the United States found that the direct effects were nearly unchanged for self-transcendence (β = −0.46, p < 0.001), perspective-taking (β = 0.09, p < 0.003) and materialism (β = 0.09, p = 0.003). None of the coefficients for the interaction terms were statistically significant in the moderating role of selflessness in the relationships between the self-structure predictors and neuroticism.

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Furthermore, the findings of Dambrun (2017) on Selflessness, self-centeredness, and durable happiness on a sample of adults in France, found that Selflessness was positively and significantly related to authentic–durable happiness (β = .36, p < .001), but not to fluctuating happiness (β = − .07, p > .28). When self-centeredness was statistically controlled for, the relationship between selflessness and authentic-durable happiness remained significant (β = .37, p < .001). Self-centeredness was significantly related to both fluctuating happiness (β = .36, p < .001) and authentic–durable happiness (β = − .17, p < .01). When Selflessness was statistically controlled for, the relationship between self-centeredness and authentic–durable happiness vanished (β = − .08, p > .18), and the relationship between self-centeredness and fluctuating happiness still remained significant (β = .33, p < .001). Self-centeredness and Selflessness were significantly and negatively correlated (β = − .25, p < .001).

These results may be explained in term of stress factors in the military. As part of their military training and employment responsibilities, both men and women are subjected to a wide range of stressor events. The possible moderating effects of different physiological, psychological, and social aspects on the stress-job performance link are important; these moderators may function by increasing or decreasing the resources that individuals may bring to bear in dealing with stresses. Coping is one of several psychosocial factors that have been proposed to moderate or mediate the relationship between stress and job performance.

5.7 REGRESSION RESULTS

R^2 result indicates that Conscientiousness, Neuroticism, Openness to Experience and Selflessness explain 15.5% of variance on Military Identity (R^2 = .155). ANOVA regression result indicates that the model is significant and valid (F = 9.46. p < .05). Selflessness has the largest effect on Military Identity (Beta = .278). Conscientiousness has the second largest effect on Military Identity (Beta = .191). Openness to Experience has the third largest effect on Military Identity (Beta=.112). Neuroticism has the lowest effect on Military Identity (Beta = -.088).

Multiple regression results indicated that Conscientiousness has a positive significant effect on Military Identity (t = 2.122, p < .05). This result indicates that Conscientiousness positively and significantly predicts Military Identity. This result contradicts an illogical result established by Structural Equation Modelling and partially supports alternate hypothesis 1, which stated that Conscientiousness has a positive and significant effect on Military Identity. This implies

that an increase in Conscientiousness is associated with a significant increase on Military Identity. Put the other way, these results indicate that military practitioners that are high on Conscientiousness will also be high on Military Identity. This is because the military is associated with high levels of discipline, this include meeting of deadlines, being diligent, sticking to plans, and not being distracted by short term barriers (Johansen et al., 2013). Conscientiousness is an essential component of personal and professional success. Conscientious persons will not be distracted by short-term barriers or challenges. Even when things do not go as planned, they work toward their objective. Arriving on time, staying on top of deadlines, and making and sticking to plans and goals are all desirable attributes (Migliore, 2011).

This result corroborates the finding of a study by Ajzen et al. (2009) who found a strong positive relationship between Conscientiousness and organisational identity (r=. 70, p< .05). Furthermore, the results of Aboul-Ela (2019) also support the results of this study who found a significant correlation between Conscientiousness and organisational identity (r= .71) in a study uncovering the big five model personality traits and organisation identification. Moreover, the results of Mahmood and Moazzam (2021) which found a positive correlation between Organisational Identification and Conscientiousness trait (β = .375, t = 13.707, p = .000) on investigating the relationship between personality traits and personal identification in an organisation is supported by the findings of this study.

Multiple regression results of this study also observed that Selflessness has a positive and significant effect on Military Identity (t= 4.280, p< .05). This result indicates that Selflessness positively and significantly predicts Military Identity. This result supports the result established by Structural Equation Modelling and partially supports alternate hypothesis 4,5,6, which stated that Selflessness has a moderating effect on the relationship between Conscientiousness, Openness to Experience, and Neuroticism on Military Identity. This implies that an increase in Selflessness is associated with a significant increase on Military Identity. Put the other way, these results indicate that military practitioners that are high on Selflessness will also be high on Military Identity. This is because the military is associated with high levels of Selflessness. Selflessness includes showing concern for fellow combatants with little concern for your own life. Loyalty, Duty, Respect, Selfless Service, Honour, Integrity,

and Personal Courage are in the Code of Conduct for uniformed members of the South African National Defence Force (SANDF) which soldiers should uphold.

The results corroborate the finding of Donia et al. (2016) on servant leadership and employee outcomes with the moderating role of subordinate's motives, it was found that the relationship of servant leadership with job satisfaction was stronger among employees with low impression management motives (β = .70, p < .001) as, compared to when impression management motives were high (β = .60, p < .001). The results also shows that servant leadership and Organisational Citizenship behaviour (OCB) were significantly negatively correlated when subordinates had low prosocial values (self-centeredness) (β = −.25, p < .05), but the relationship was not significant when subordinate had high prosocial values (Selflessness) (β = −.01, n.s.).

Neuroticism (t = -1.032, p > .05) has a negative non-significant effect on Military Identity. This result indicates that Neuroticism negatively predicts Military Identity. This result supports the result established by Structural Equation Modelling and partially supports alternate hypothesis 3, which stated that Neuroticism has a negative and significant effect on Military Identity. This implies that an increase in Neuroticism is associated with a decrease on Military Identity. Put the other way, these results indicate that military practitioners that are high on Neuroticism will be low on Military Identity. This is because Neuroticism is associated with negative effects such as anxiety, self-consciousness, irritability, emotional instability, and depression. All these traits are bad for the military environment (Aboul-Ela, 2019).

This result corroborates the findings of a study by Aghaz and Hashemi (2014) who found that Neuroticism has a negative relationship with organisational identification (r=.03, p<.001). Furthermore, a study conducted by Tett et al. (1991) on Norwegian Military personnel found a negligible correlation between Neuroticism and Military Identity (r=.01, p<.001). Moreover, Moazzam (2021) also found the relation between Neuroticism trait and organisational identification was also significant but turned out to be negative (β = -0.163, t = -8.149, p = .000).

Openness to Experience also indicated a positive non-significant effect on Military Identity (t = 1.480, p > .05). This result indicates that Openness to Experience positively predicts Military Identity. This result contradicts the result established by Structural Equation Modelling, but

support alternate hypothesis 2, which stated that Openness to Experience has a positive and significant effect on Military Identity. This implies that an increase in Openness to Experience is associated with a increase on Military Identity. Put the other way, these results indicate that military practitioners that are high on Openness to Experience will be high on Military Identity. Openness to Experience is associated with being open to travel to new destinations, meet new people, and coming out of your comfort zone to learn new things. A good soldier is regarded as one that gets out of his comfort zone to learn a new skill, willing to travel to unknown and new destinations, and meeting new people (Johansen et al., 2013), therefore, this relationship was expected to be positive.

This result supports the findings of a study by Hoffman and Woehr (2006) who found an above-average positive significant correlation between organisational identity and Openness to Experience (r=.65). Furthermore, an above-average correlation was found among Openness to Experience, and Military Identity as indicated during a study conducted by Thoemes et al. (2012) on German Military personnel (r=.64, p<.05). Moreover, the result of this study is also in agreement with the results of Mahmood and Moazzam (2021) who found a significant positive association between Openness to Experience and organisational identification (β = .092, t = 4.953, p = .000).

5.8 CORRELATIONS RESULTS

Correlation results indicate that the relationship between Conscientiousness and Military identity is positive, with a small relationship, but significant (r = .259, p < .05). Finding further confirms the plausibility of treating this relationship as a main effect in conducting moderation with Selflessness as a moderator. This result indicates that Conscientiousness positively and significantly predicts Military Identity. This result contradicts an illogical result established by Structural Equation Modelling and partially supports alternate hypothesis 1, which stated that Conscientiousness has a positive and significant effect on Military Identity. This implies that an increase in Conscientiousness is associated with a significant increase on Military Identity. Put the other way, these results indicate that military practitioners that are high on Conscientiousness will also be high on Military Identity. The military is associated with high levels of discipline, this include meeting deadlines, being diligent and sticking to plans, and not being distracted by short term barriers (Johansen et al., 2013).

This result corroborates the finding of a study by Ajzen et al. (2009) who found a strong positive relationship between Conscientiousness and organisational identity (r=. 70, p< .05). Furthermore, the results of Aboul-Ela (2019) also support the results of this study who found a significant correlation between Conscientiousness and organisational identity (r= .71) in her study uncovering the big five model personality traits and organisation identification. Moreover, the results of Mahmood and Moazzam (2021) is also in support of this results. These authors found a positive correlation between Organisational Identification and the Conscientiousness trait (β = .375, t = 13.707, p = .000) on investigating the relationship between personality traits and personal identification in an organisation.

Correlation results also indicate that the relationship between Neuroticism and Military Identity is negative and significant (r=-.225, p< .05), also confirming the plausibility of conducting moderation with this relationship as a main effect. This result supports the result established by Structural Equation Modelling and partially supports alternate hypothesis 3, which stated that Neuroticism has a negative and significant effect on Military Identity. This implies that an increase in Neuroticism is associated with a decrease on Military Identity. This is true because neuroticism has adverse effects like anxiety, depression, self-consciousness, irritation, and emotional instability. These are all undesirable characteristics in a military context (Aboul-Ela, 2019).

This result supports research by Aghaz and Hashemi (2014) that demonstrated a negative relationship between Neuroticism and organisational identity (r=.03, p.001). Additionally, research by Tett et al. (1991) on Norwegian military members found a weak relationship (r=.01, p.001) between Neuroticism and Military Identity. Additionally, Moazzam (2021) discovered that there was a substantial but negative relationship between the Neuroticism trait and organisational identification (= -0.163, t = -8.149, p =.000).

The relationship between Openness to Experience and Military Identity is positive, with a small relationship, but significant (r=.215, p< .05) also confirming the plausibility of conducting moderation with this relationship as a main effect. This result indicates that Openness to Experience positively predicts Military Identity. This result contradicts the result established by Structural Equation Modelling, and support alternate hypothesis 2, which stated that Openness to Experience has a positive and significant effect on Military Identity. This implies that an increase in Openness to Experience is associated with an increase on

Military Identity. Put the other way, these results indicate that military practitioners that are high on Openness to Experience will be high on Military Identity. Openness to Experience is associated to being open to exploring new places, meet new people, and step outside of your comfort zone to learn something new. This relationship was expected to be positive since a good soldier is one who steps beyond of his comfort zone to learn a new skill, is open to traveling to new places and meeting new people (Johansen et al., 2013).

This result supports the findings of a study by Hoffman and Woehr (2006) who found an above-average positive significant correlation between organisational identity and Openness to Experience (r=.65). Furthermore, an above-average correlation was found among Openness to Experience, and Military Identity as indicated during a study conducted by Thoemes et al. (2012) on German Military personnel (r=.64, p<.05). Moreover, the result of this study is also in agreement with the results of Mahmood and Moazzam (2021) who found a significant positive association between Openness to Experience and organisational identification (β = .092, t = 4.953, p = .000).

Correlation results also indicate that the relationship between Selflessness and Military Identity is positive, with a small relationship, but significant (r = .220, p < .05). This result indicates that Selflessness positively and significantly predicts Military Identity. This result supports the result established by Structural Equation Modelling and partially supports alternate hypothesis 4,5,6, which stated that Selflessness has a moderating effect on the relationship between Conscientiousness, Openness to Experience, and Neuroticism on Military Identity. This implies that an increase in Selflessness is associated with a significant increase on Military Identity. Put the other way, these results indicate that military practitioners that are high on Selflessness will also be high on Military Identity. This is because the military is associated with high levels of Selflessness. Selflessness includes showing concern for fellow combatants with little concern for your own life. Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage are in the Code of Conduct for uniformed members of the South African National Defence Force (SANDF) which soldiers should uphold.

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The results corroborate the finding of Donia et al. (2016) on servant leadership and employee outcomes with the moderating role of subordinate's motives, it was found that the relationship of servant leadership with job satisfaction was stronger among employees with low impression management motives (β = .70, p < .001) as, compared to when impression management motives were high (β = .60, p < .001). The results also shows that servant leadership and Organisational Citizenship behaviour (OCB) were significantly negatively correlated when subordinates had low prosocial values (self-centeredness) (β = −.25, p < .05), but the relationship was not significant when subordinate had high prosocial values (Selflessness) (β = −.01, n.s.).

5.9   LIMITATION OF THE STUDY

The present study examined the effect of Conscientiousness, Openness to Experience and Neuroticism on Military Identity: the moderating role of Selflessness in a South African Military University. However, some limitations should be considered in future studies. First, the sample size was relatively small - future studies can examine the variables of this study using a larger sample size. Because a convenience sample uses willing participants, it is impossible to generalise the findings of this study to the whole organisation (Sekaran & Bougie, 2016). Future studies may take need to bridge this gap.

Second, the data was collected from South African Military University as one of the military units which limits the generalisability of the results. Third, this study focused on uniformed employees as the target population which may influence the strength of applicability and results found in the current study. Fourth, self-report questionnaires were utilised to gather data from the participants, therefore, response bias (negative or positive social desirability) must be considered, which may have affected the findings of the study.

5.10   RECOMMENDATIONS

Recommendations for this study were formulated against the background of the results. All the mean values indicate above average and average levels of the variables of the study. The SEM findings of this study indicated a negative effect of Conscientiousness on Military Identity, which was against expectations. Realistic, expected results yielded a positive

relationship between Conscientiousness and Military Identity. Correlation and regression results indicates that Conscientiousness has a positive and significant effect on Military Identity. In other words, an increase in Conscientiousness will result in an increase in Military Identity. This further implies that the military should increase the levels of Conscientiousness among practitioners in order to increase the levels of Military Identity among these practitioners. This may lead to an increase in employee performance and organisational performance and productivity.

The SEM findings of this study also indicated a negative effect of Openness to Experience on Military Identity, which was also against expectations. Realistic, expected results yielded a positive relationship between Openness to Experience and Military Identity. Correlation and regression results indicated a small relationship among Openness to Experience and Military Identity. Put differently, an increase in Openness to Experience will result in an increase in Military Identity. In other words, the military should increase the levels of Openness to Experience among practitioners in order to increase the levels of Military Identity among these practitioners. This may also lead to a step in the right direction in terms of the behaviour of military practitioners in the sense that they will volunteer for operations out of their own willingness without being forced to do so.

The SEM findings of this study indicated a negative effect of Neuroticism on Military Identity, which was expected. The Correlation and regression results further indicated that the relationship between Neuroticism and Military Identity is negative and significant. This implies that an increase in Neuroticism will result in a decrease in Military Identity. Therefore, the military should look at ways to decrease Neuroticism among practitioners so that the level of Military Identity goes up. By doing so, the military will have practitioners that are emotionally stable with low levels.

According to the regression results Selflessness had the largest effect on Military Identity. The Correlation results also indicated that there is a positive relationship between Selflessness and Military Identity. Selflessness had a moderating effect in the relationship between the personality traits under study and Military Identity according to the moderation results. This implies that an increase in the levels of Selflessness will result in an increase in the levels of Military Identity. Therefore, the military should increase the levels of Selflessness among practitioners in order to have soldiers who identify with the organisation.

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From these latter observations, it would be recommended that:

When the human resources and organisational development practitioners do recruitment, they should take cognisance of the impact of personality types on Military Identity through the usage of personality tests to facilitate matching of person/organization fit, that in return enhance the ability to identify. Moreover, orientation programs used to ease the identification process could be developed with a level of customisation considering individual differences. Furthermore, individual differences are pivotal dimensions that are significant to be considered when matching organisational and personal identities. In this respect, organizations may confront obstacles of finding new routes to support their employees to identify in an easier attempt. As such, the choice of communication style to suit the context of these personality differences could support a smoother identification. Mirroring the choice of language, personalised meetings for feedback and development, dealing with emotionally charged situations, opinions, cultural backgrounds diversity, roles, experiences, and beliefs should be carefully considered within the identification process.

- Individuals that score higher on Conscientiousness and Openness to Experience should be considered for recruitment since they tend to score higher on Military Identity. Conscientiousness is characterised by diligence, rationality, orientation towards goals, and an individual's personal conviction about his/her competencies. These traits are important for military personal in the performance of task. Salgado's (1998) research on the performance of work by soldiers and civilians showed that Conscientiousness and diligence are important predictors of Military Identity. As Pointed out by Thomas et al. (2012) soldiers are often required to learn new tasks or skills very quickly, whereas people in civilian life may be required to learn these skills in six months or more. A good soldier is thus regarded as an individual who is able to learn new skills and tasks in a short space of time. As reported by Thomas et al. (2012), the nature of military operations often requires soldiers to travel to new destinations, learn new cultures, and to do things that take them out of their comfort zone. Soldiers who are open to experience often prefer to take part in missions that will allow them to get out of their comfort zone, take risks, and step into the unknown.

- Practitioners should also take note that neurotic individuals do not identify with the military, therefore, when doing recruitment, it is recommended that individuals who score lower on this trait should be considered. As described by Migliore (2011) Neuroticism as excessive worry that results in mental distress, inability to enjoy lifestyle activities, and emotional suffering. It includes traits such as being nervous, pessimistic, experiencing negative emotions, excessive worrying, and anxiety. When a soldier is unable to cope defensively with a series of situations, they lose self-confidence, feel self-condemnatory, and their capacity for sociability declines and their craving for affection becomes intensified. These authors indicate that the military presents an individual with a series of life-threatening events, which require a soldier to focus on the task at hand for lengthy periods of time while filtering out distractions that may lead to the unsuccessful completion of the mission.

- The study also found that Selflessness has any moderating role in the relationships among Conscientiousness, Openness to Experience, and Neuroticism. Based on this finding, those who score high on Selflessness should be considered when doing recruitment. As indicated by Neff (2003), Selflessness is characterised by low levels of self-centeredness and a low degree of importance given to the self. Characteristics like altruism, kindness, respect, empathy, compassion, and the need for harmony are the characteristics of individuals high on Selflessness. Acting selflessly can help members of the armed forces connect with each other because helping others makes us feel good, and in turn, the other person experiences feelings of gratitude, and as a result, we bond with each other, which promotes teamwork which is of fundamental value in the military.

- Developing selflessness through training or induction or socialisation could go a long way into developing strong Military Identity, taking advantage of the positive behaviours and expectations associated with this factor in the military environment,

5.11 CONCLUSION

This study examined the effect of Conscientiousness, Openness to Experience, and Neuroticism on Military Identity in a South African Military University and the moderating role of Selflessness. Identification with the organisation an individual is working for has been associated with performance, positive attitude, positive work outcomes if nurtured properly. Being associated with an organisation can develop pride and loyalty to the organisation in members and lead to organisational identification among employees.

This study found that employees that score high on Conscientiousness and Openness to Experience are more likely identify with the military and produce positive outcomes for the organisation. This is because Conscientiousness and Openness to Experience are important personality traits in the military due to the nature of work. Additionally, identifying with the organisation also reduces the chances that individuals will leave the organisation. Furthermore, the study found that Those that score high on Neuroticism do not identify with the Military. This is because the dimensions of the neurotic personality trait are not favourable for the nature of work done. These dimensions do not only affect employees' attitude towards the organisation, but also affects employee performance.

Selflessness was found to have a moderating role in the relationship among personality traits such as Conscientiousness, Openness to Experience, and Neuroticism on Military Identity. This is because the nature of work within the military often requires a soldier to be selfless and put the needs and demands of the organisation before his/her own. This stud contributed to the literature on the Big Five personality traits and Military Identity.

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APPENDICES

Appendix A: Consent form

STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN RESEARCH

You are invited to take part in a study conducted by Timothy Solomons, from the Faculty of Military Science (Military Academy) at Stellenbosch University. You were approached as a possible participant because you are a student at the Military Academy and the current study focus is on students at the Military Academy.

1. PURPOSE OF THE STUDY

The purpose of the study is to investigate whether there is a relationship between variables such as Conscientiousness, Openness to Experience, Neuroticism, Selflessness, and Military Identity.

2. WHAT WILL BE ASKED OF ME?

If you agree to take part in this study, you will be asked to complete three questionnaires, which will take you approximately 20 minutes. You can complete the questionnaires at your convenience.

3. POSSIBLE RISKS AND DISCOMFORTS

There are no risks involved in the participation of this study.

4. POSSIBLE BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

There are no direct benefits for the participant in this study. However, this study will contribute to a body of knowledge and will benefit the South African National Defence Force (SANDF) in understanding whether there is a relationship between personality variables and Military Identity. It can also lead to improved human resource processes for the SANDF.

5. PAYMENT FOR PARTICIPATION

There is no payment for participation in this study.

6. PROTECTION OF YOUR INFORMATION, CONFIDENTIALITY, AND IDENTITY

Any information you share with me during this study that could possibly identify you as a participant will be protected. This will be done by keeping all information anonymous and no questionnaire will require of you to provide your name or any other confidential information that may identify you. Nobody except the researcher and his supervisor will have access to any information that participants provide. Completed questionnaires will be stored safely in the researcher's locker to which only he has access to.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to participate in this study or not. If you agree to take part in this study, you may withdraw at any time without any explanation or consequence. You may also refuse to answer any questions you do not want to answer and remain in the study. Should a participant decide to withdraw after completing all the questionnaires, the data provided will still be used for this study because the answers cannot be withdrawn from the dataset due to the fact that it is anonymous.

8. RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact Timothy Solomons on 022 702 3068 and/or the supervisor, Dr Oscar Mthembu on 022 702 3122.

9. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights, or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

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DECLARATION OF CONSENT BY THE PARTICIPANT

As the participant I confirm that:

- I have read the above information and it is written in a language that I am comfortable with.

- I have had a chance to ask questions and all my questions have been answered.

- All issues related to privacy, and the confidentiality and use of the information I provide, have been explained.

By signing below, I _____ *(name of participant)* agree to take part in this research study, as conducted by Timothy Solomons *(name of principal investigator).*

_____   _____

Signature of Participant   **Date**

DECLARATION BY THE PRINCIPAL INVESTIGATOR

As the **principal investigator**, I hereby declare that the information contained in this document has been thoroughly explained to the participant. I also declare that the participant has been encouraged (and has been given ample time) to ask any questions. In addition, I would like to select the following option:

	The conversation with the participant was conducted in a language in which the participant is fluent.
	The conversation with the participant was conducted with the assistance of a translator (who has signed a non-disclosure agreement), and this "Consent Form" is available to the participant in a language in which the participant is fluent.

_____   _____

Signature of Principal Investigator   **Date**

Appendix B: Questionnaires

The Big Five Inventory (BFI)

The BFI is a self-report inventory designed to measure the Big Five dimensions (Conscientiousness, Openness to Experience, Neuroticism, Extraversion, and Agreeableness). It is quite a brief multidimensional personality inventory (44 items total) and consists of short phrases with relatively accessible vocabulary.

Instructions

The items below are scored on a five-point Likert scale: 1 = **strongly disagree**, 2 = **slightly disagree**, 3 = **neutral**, 4 = **slightly agree**, 5 = **strongly agree**. There are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please mark with an **X** next to each statement to indicate the extent to which you agree or disagree with that statement.

I see myself as someone who...	Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly agree
1. Is talkative	1	2	3	4	5
2. Tends to find fault with others	1	2	3	4	5
3. Does a thorough job	1	2	3	4	5
4. Is depressed, blue	1	2	3	4	5
5. Is original, comes up with new ideas	1	2	3	4	5
6. Is reserved	1	2	3	4	5
7. Is helpful and unselfish with others	1	2	3	4	5
8. Can be somewhat careless	1	2	3	4	5
9. Is relaxed, handles stress well	1	2	3	4	5
10. Is curious about many different things	1	2	3	4	5
11. Is full of energy	1	2	3	4	5
12. Starts quarrels with others	1	2	3	4	5
13. Is a reliable worker	1	2	3	4	5
14. Can be tense	1	2	3	4	5
15. Is ingenious, a deep thinker	1	2	3	4	5
16. Generates a lot of enthusiasm	1	2	3	4	5
17. Has a forgiving nature	1	2	3	4	5
18. Tends to be disorganised	1	2	3	4	5
19. Worries a lot	1	2	3	4	5
20. Has an active imagination	1	2	3	4	5
21. Tends to be quiet	1	2	3	4	5
22. Is generally trusting	1	2	3	4	5
23. Tends to be lazy	1	2	3	4	5
24. Is emotionally stable, not easily upset	1	2	3	4	5

I see myself as someone who…	Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly agree
25. Is inventive	1	2	3	4	5
26. Has an assertive personality	1	2	3	4	5
27. Can be cold and aloof	1	2	3	4	5
28. Perseveres until the task is finished	1	2	3	4	5
29. Can be moody	1	2	3	4	5
30. Values artistic, aesthetic experiences	1	2	3	4	5
31. Is sometimes shy, inhibited	1	2	3	4	5
32. Is considerate and kind to almost everyone	1	2	3	4	5
33. Does things efficiently	1	2	3	4	5
34. Remains calm in tense situations	1	2	3	4	5
35. Prefers work that is routine	1	2	3	4	5
36. Is outgoing, sociable	1	2	3	4	5
37. Is sometimes rude to others	1	2	3	4	5
38. Makes plans and follows through with them	1	2	3	4	5
39. Gets nervous easily	1	2	3	4	5
40. Likes to reflect, play with ideas	1	2	3	4	5
41. Has few artistic interests	1	2	3	4	5
42. Likes to cooperate with others	1	2	3	4	5
43. Is easily distracted	1	2	3	4	5
44. Is sophisticated in art, music, or literature	1	2	3	4	5

Selflessness Scale

The Selflessness scale measures the extent to which a person is selfless. The higher the score, the higher the Selflessness. The tendency to ignore one's own needs and serve the needs of others is referred to as Selflessness.

Instructions

The items below are scored on a four-point Likert scale: 1 = highly disagree, 2 = disagree, 3 = agree, 4 = highly agree. Please mark the appropriate box with an **X** below each statement to indicate to what extent you agree or disagree with the statement.

1. I am willing to sacrifice a lot for the benefit of others.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

2. If someone hurts me, I usually forgive him/her.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

3. I usually give in to the will of others.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

4. If the family budget is limited, l will give up my part.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

5. If a member of my family is in great difficulty and I cannot help, I will feel there is no point to my life.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

6. If someone has obligations towards me, I don't care what his/her difficulties are.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

7. I am more bothered by other's problems than my own.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

8. It is not so terrible if I exploit others.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

9. If a member of my family asks me to join him/her in his/her hobby or leisure time activity, I will join him/her to make him/her happy, whether I like that activity or not.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

10. If I am in the midst of doing something and it seems to me that someone from my family needs that particular instrument or place, I will usually give it up.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

11. If one of my household members is unhappy, I will immediately try to comfort him/her or make him/her happy.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

12. My own enjoyment is the last thing that is important to me.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

13. I am an expert in guessing what my family or friends need.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

14. While waiting in line at the movies or grocery store, I will try to manoeuvre my way towards the front of the line.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

15. I sometimes act like a parent towards my parents.

1. Highly disagree	2. Disagree	3. Agree	4. Highly agree

NORWEGIAN PROFESSIONAL IDENTITY SCALE (NPIS)

The NPIS measures Military Identity. This scale is of Norwegian origin and was adapted for the purpose of this study.

Instructions

The items below are scored on a seven-point Likert scale: 1 = totally disagree, 2 = disagree, 3 = somewhat disagree, 4 = neutral, 5 = somewhat agree, 6 = agree, 7 = totally agree. Please mark the appropriate box with an **X** below each statement to indicate to what extent you agree or disagree with the statement.

Idealism

1. The Armed Forces should primarily be used to defend South African territory.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

2. My motivation to participate in international operations depends on whether or not these support South African interests at large.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

3. It is wrong to participate in military operations that do not explicitly promote South African values and interests.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

4. It is wrong to participate in war-like actions in a country that is not my own.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

5. It is more important to defend one's own territory than to defend South African interests in international operations.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

6. I look upon work in the Armed Forces as a calling where I can serve my country.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

7. A clear indication of being a good citizen is to serve in the Armed Forces to defend one's country.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

8. My motivating power to be in the Armed Forces is to serve something more important than my personal needs.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

9. The cause I am fighting for during operations is of secondary importance.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

10. The uniform really brings forward my national pride.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

11. Traditional ideals such as Service, King, and Country are out of date and belong to history.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

Professionalism

1. My motivation is to gain operational experience by using my military skills in highly intensive operations.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

2. The possibility of participating in war actions is an important motivating factor to me.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

3. Self-sacrifice, courage, and fellowship in war are more important than ever.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

4. I prefer service in high-intensity rather than in peacekeeping operations.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

5. One of my top motivating factors is to completely develop and master my military skills.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

6. When I joined the Armed Forces, I had a clear expectation of taking part in war operations.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

7. Codes of honour and unit values are of the utmost importance in the Armed Forces.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

8. The government may deploy me to whichever mission as long as it does not contradict my moral

convictions.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

9. The most important part of the military role is to prepare for and conduct war-like operations.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

10. I believe that controlled aggression will be an important element if I have to take part in war actions.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

11. The idea of fellowship in arms as the primary motivating factor to participate in operations is subordinated.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

12. The Armed Forces should be characterised by a warrior culture.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

Individualism

1. Self-fulfilment is a very important part of my engagement in the Armed Forces.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

2. I am motivated to serve in the Armed Forces due to the possibilities and challenges I am offered.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

3. An important premise for participation in international operations is to be rewarded with high salaries.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

4. The Armed Forces must respect my civilian life, e.g., family, residential, and leisure interests.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

5. I see being in the Armed Forces as an ordinary job.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

6. In the Armed Forces, duty takes priority over rights.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

7. I regard being in the Armed Forces as one of several possible job alternatives.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

8. For me it is natural to compare advantages and disadvantages to be in the Armed Forces versus having a civilian job.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

9. I am willing to leave the Armed Forces if I am offered a civilian job with better salary and working conditions.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

10. Good payment is one of the most important presumptions to participate in international operations abroad.

1. Totally disagree	2. Disagree	3. Somewhat disagree	4. Neutral	5. Somewhat agree	6. Agree	7. Totally agree

Appendix C: Institutional permission letter

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DFMS

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defence Intelligence
Department:
Defence SALDANHA COMMUNICATION CENTRE
REPUBLIC OF SOUTH AFRICA
R 011
1 3 JUL 2021
MILITARY ACADEMY

DI/DDS/R/202/3/7

Telephone: (012) 315-0660
Fax: (012) 326-3246
Enquiries: Lt Col M.C. Bapela

Defence Intelligence
Private Bag X337
Pretoria
0001
/ 5ᵗʰ July 2021

AUTHORITY TO CONDUCT RESEARCH IN THE DEPARTMENT OF DEFENCE (DOD): LT T.I.D. SOLOMONS

1.   A telephonic discussion between Lt T.I.D Solomons of the Military Academy and WO1 K. Skwayiya of the Defence Intelligence (DI) on the 9ᵗʰ July 2021, as well as a receipt of a request letter MA/R/103/104009437MC dd 31 May 2021 to conduct research in the DOD with a Research Proposal attached as per requirements is acknowledged.

2.   Lt T.I.D. Solomons is hereby granted permission from a security perspective to conduct research in the DOD on the topic entitled "The Effect of Conscientiousness, Openness to Experience and Neuroticism on Military Identity in a South African Military University: The Moderating Role of Selflessness" as a prerequisite for an attainment of a MMil Degree at the Military Academy under the auspices of the University of Stellenbosch as requested.

3.   After the completion of the research, the final research product must be forwarded to Defence Intelligence (DI), Sub-Division Counter Intelligence (SDCI) for a final authorisation before it may be published or distributed to any entity outside the DOD.

4.   Approval is however granted on condition that there is strict adherence to inter alia DODI 2/99 "Disclosure of Defence Information", Protection of Personal Information (POPI) Act 4 of 2013 and Section 104 of the Defence Act (Act 42 of 2000) pertaining to protection of DOD Classified Information and the consequences of noncompliance.

5.   For your attention.

(M.E. PHENDANI)
DIRECTOR DEPARTMENTAL SECURITY: BRIG GEN
KS/KS (Lt T.I.D. Solomons)

DSTR

For Action

Commandant Military Academy   (Attention: Lt T.I.D. Solomons)

File: DI/DDS/R/202/3/7

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