EXPLORING THE RELATIONSHIP BETWEEN SELF-ESTEEM, RESILIENCE AND PROBLEM-SOLVING SKILLS OF THIRD YEAR STUDENTS AT THE UNIVERSITY OF NAMIBIA

A THESIS SUBMITTED IN PARTIAL FULFILMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS IN CLINICAL PSYCHOLOGY

OF

THE UNIVERSITY OF NAMIBIA

BY

HILET NOLTE

201601638

APRIL 2024

SUPERVISOR: DR MANFRED JANIK (UNIVERSITY OF NAMIBIA)

Abstract

Literature highlights the necessity of self-esteem, resilience and problem-solving skills across different stages and domains of life. The aim of this study was to determine the levels of self-esteem, resilience and problem-solving skills of third year students at the Windhoek-based campuses of UNAM, as well as to explore the relationships between self-esteem, resilience and problem-solving skills. Moreover, it intended to determine possible differences between male and female students with regards to levels of self-esteem, resilience and problem-solving skills. Finally, this study aimed to determine whether self-esteem or resilience had a larger impact on the level of problem-solving skills. This cross-sectional study used a quantitative research paradigm, with an inductive approach and a non-experimental, correlational research design. The Rosenberg Self-Esteem Scale (RSES), the Connor–Davidson Resilience Scale (CD-RISC), and the Problem Solving Inventory (PSI), in addition to a socio-demographic questionnaire, was employed to collect data from 326 participants through a probability sampling technique, simple random sampling. Data from the questionnaires were analysed using the Statistical Package for Social Sciences (SSPS) (Version 28.0) with descriptive statistics and inferential statistics used to explore the data on these constructs. Findings from this study revealed moderate overall levels of self-esteem, resilience and problem-solving skills with third year students at the University of Namibia. The study found significant, positive interactions between each of the three variables. In addition, there were no significant differences in scores of the three constructs for males and females. The study found that resilience had a larger impact (than self-esteem) on the level of problem-solving skills. Finally, it was established that resilience mediates the relationship between self-esteem and problem-solving skills. Along with further local research and development of positive

psychology, initiatives to cultivate inner resources, such as workshops and mentorship programs may prove helpful in the Namibian context so as to help citizens overcome difficulties.

Keywords: Self-esteem, Resilience, Problem-solving skills, University students, Relationship

Table of Contents

LIST OF FIGURES AND TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

UNAM	-	University of Namibia
COR	-	Conservation Of Resources
RSES	-	Rosenberg Self-Esteem Scale
PSI	-	Problem Solving Inventory
CD-RISC	-	Connor-Davidson Resilience Scale
PSC	-	Problem Solving Confidence
AAS	-	Approach-Avoidance Style
PC	-	Personal Control

ACKNOWLEDGEMENTS

Any undertaking of this scope and magnitude cannot be accomplished alone. I am filled with appreciation towards all colleagues, friends, and loved ones who, throughout the course of this mini thesis, shared their time, knowledge, support and resources to see this through. It was thanks to them that I was to complete this study and ultimately my studies.

I would like to acknowledge and give my warmest thanks to my supervisor, Dr. Manfred Janik, who made this work possible. Your support, guidance and understanding have encouraged me throughout this research and the whole program.

I would also like to thank all the lectures at UNAM who selflessly offered their time and advice, as well as every individual at UNAM who was involved in the approval and clearance for this study. I would further like to extend my gratitude to the UNAM employees who provided the valuable statistics and information for this research.

Thank you to all the students who participated in this research study. This study would not be possible without your input.

I would also like to thank the psychologists at the Mental Health Unit, who generously provided their assistance, knowledge and advice during this time.

Mr and Mrs Hendrik and Maretha Bam, thank you for all you help and support during this course.

To my support network, thank you for every sacrifice, word of encouragement, prayer and your unconditional love, patience and support. Words can never be enough to describe how much each of you is valued. My father, Willem, who is the most resilient person I know, thank you for all that you are and do. My brother, Willie, you always

have our backs. Thank you for making grim situations lighter with your dry sense of humour. My mother, Drienie, for your unswerving compassion and wisdom. Thank you for the freedom you bring. My sister, cheerleader and lifelong friend, Mia, you are admired. Hein, my lighthouse, thank you for your unwavering love and faith in me. To my friends, you are cherished.

To everyone whose names I might not have mentioned, but whose value in my life and this course was incontestable - each of you fulfilled an inimitable role in helping me realise this dream.

Last, but certainly not least, I am thankful to my Heavenly Father for providing me the opportunity, ability, strength, and resources to carry out and complete this research study and course. Without Your blessings and favour, nothing would be possible.

DEDICATION

To Mom, Dad, Mia, Willie, and Hein.

DECLARATION

I, Hilet Nolte, hereby declare that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

Hilet Nolte		April 2024
Name of Student	Signature	Date

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This first chapter will provide a general synopsis of the purpose of this study. Firstly a brief introduction to and some background information regarding self-esteem, resilience, and problem solving skills will be provided. An overview of the aforementioned constructs along with its relation to some of the existing challenges in Namibia will be discussed. Subsequently the objectives for this research study will be outlined. In addition, the significance of this study and expectations for its contribution to research on self-esteem, resilience, and problem solving skills in Namibia will be discussed. The limitations and delimitations of this research study will be highlighted, followed by a conclusion to the chapter.

1.2 Background of the study

The general definition of self-esteem refers to the belief in one's own abilities to achieve a certain outcome (Chemers et al., 2000). According to Bandura (1977) one's perception of self-esteem is the central mediating construct of behaviour, drive and success. Greenacre et al. (2014) clarify that the more generalised form of self-confidence, where there is a generalised belief in one's ability, is better defined as self-esteem which refers to an emotion-based assessment about one's own worth or value. According to Ahmed et al. (2011) the confidence or believe in oneself is termed as self-efficacy. It can be deduced that self-efficacy means self-esteem, self-reliance, and trust in oneself (Ahmed et al., 2011).

Resilience refers to a person's ability to function capably in spite of life stressors (Murphey et al., 2013). It is suggested that resilient adolescents are more likely to cope well in adulthood, even if that person has experienced grim life circumstances (Murphey et al., 2013). According to De Almeida Santos and Soares (2018), problem-solving enables individuals to implement coping strategies to deal with the difficulties of daily life and it requires the right choice of coping mechanisms. Owning the ability to deal with adversity and tasks that require problem-solving are considered to be essential in developing resilience (De Almeida Santos & Soares, 2018). A person with problem-solving skills is considered to be a creative, self-confident, and independent thinker (Özreçberoğlu & Çağanağa, 2018). Conceivably, the societies assembled by such individuals can easily solve prevailing problems (Özreçberoğlu & Çağanağa, 2018).

Namibians are challenged with countless difficulties and crises such as drought, various endemic diseases, HIV/AIDS, income disparity, deprivation and pervasive poverty (Mwinga, 2012). According to Manhas (2014), a noteworthy positive correlation between self-esteem and the different dimensions of quality of life was found. Interventions aimed at individuals with HIV/AIDS could well encompass self-esteem as a facilitator of quality of life (Manhas, 2014). At the very core of these issues, lies the phenomenon of unemployment and underemployment which has come to be dominant traits of the Namibian economy (Mwinga, 2012). In 2018, the overall unemployment rate in Namibia was estimated at 33.4% of the Namibian population (Namibia Statistics Agency, 2018). The highest unemployment statistics were recorded amongst the Namibian youth with 46.1% of the unemployed community (Namibia, 2021). This means that no less than a third of Namibia's adult

citizens are unemployed, causing serious economic, social, and political risks. High unemployment can cause higher crime rates, social segregation, and impact financial welfare negatively. High unemployment can also see to waning of human capital, dejection and suffering, death, and social instability (Mwinga, 2012). A nation's prosperity is determined by citizens' levels of employment and productivity, which in turn relies on the skills they possess and how successfully those skills are applied (ILO, 2010 cited in Mwinga, 2012). In addition, Namibia's tertiary education system faces problems such as lack of funding for students, increasingly high dropout rates, and poorly prepared students for the ensuing employment market (Jellenz et al., 2020). A study by James and Amato (2013) highlights the role of self-esteem in social class outcomes. Self-esteem was positively related to the prospect of college attendance (James & Amato, 2013). It was established that self-esteem is indeed implicated in the probability of college completion or current enrollment, an important indicator of social class procreation (James & Amato, 2013). Individuals with higher levels of self-esteem were found to have an increased likelihood of having either completed or being enrolled in college (James & Amato, 2013).

According to Ibrahim (2013) it is estimated that 450 million of African youth will be searching for jobs, but only 50% will be able to get a job in the next three decades. This is alleged to be the reality of young Africans, unless change occurs on our continent (Ibrahim, 2013). "Change" could also mean change of personal perspective and more effective mobilisation of internal resources. For example, by enhancing problem-solving skills, resilience levels and self-esteem in Namibia's youth, it might enable these individuals to find ways of sustaining themselves under difficult conditions.

1.3 Statement of the problem

From the research conducted, it is evident that Namibians are confronted with grim circumstances daily (Mwinga, 2012; Ibrahim, 2013; Namibia, 2021). Existing literature highlights the necessity and positive effect of self-esteem, resilience and problem-solving skills across different stages and domains of life (De Almeida Santos & Soares, 2018; Murphey et al., 2013; Özreçberoğlu & Çağanağa, 2018; Perkins, 2018). According to Gonzo (2001), most of Namibia's "street unemployed" are youth or young adults who lack education and vocational training. Of major concern are the findings that 66.3% of the respondents in the Gonzo study scored low on self-esteem, and that 95% of the respondents showed signs of depression (Gonzo, 2001).

A study by Matiti (2020) emphasised the necessity for more research studies regarding the levels of self-efficacy of students at UNAM and for institutions to incorporate endeavours intended to enhance students' psychosocial adjustment to university life (Matiti, 2020). Research suggests a relationship between self-efficacy and healthy adjustment to educational challenges (Malik et al., 2017).

Furthermore, research by Rodriques and Pieters (2019) states the importance of both self-efficacy and resilience, among other internal resources, in a person's positive psychological development, which may incite one's growth and performance. However, the number of research studies about the relationship between self-esteem, resilience and problem-solving skills (which are all internal resources) are limited, especially with a population of university students. No such studies could be found that were conducted in Namibia. Few studies have explored positive psychological constructs that may help promote well-being. This is especially true in the Namibian

context, leading individuals and establishments to fail to realise that positive psychology constructs like resilience, self-esteem and problem-solving skills are available, yet untapped resources that can help persons take control of and improve their welfare.

1.4 Research objectives

The main aim of this research study is to explore self-esteem, resilience and problem-solving skills of third year students at the Windhoek-based campuses (Main Campus, Hage Geingob Campus, Khomasdal Campus, and Neudam Campus) of the University of Namibia (UNAM). The objectives of this study are:

1.4.1 To determine the levels of self-esteem, resilience and problem-solving skills of third year students at the Windhoek-based campuses of UNAM.

1.4.2 To explore the relationships between self-esteem, resilience and problem-solving skills of third-year students at the Windhoek-based campuses of UNAM.

1.4.3 To determine possible differences between male and female students with regards to levels of self-esteem, resilience and problem-solving skills.

1.4.4 To determine whether self-esteem or resilience has a larger impact on the level of problem-solving skills.

1.5 Significance of the study

Existing literature asserts that self-esteem is linked to educational achievement, negotiation, success, personal well-being, and more (Perkins, 2018). It is frequently emphasised that employees should have a fair amount of self-esteem so as to thrive at

work (Perkins, 2018). According to Murphey et al. (2013), problem-solving skills are among the cognitive skills that seem to help individuals triumph over demanding situations. Such cognitive skills could perhaps make it easier for individuals to produce various efficient resolutions to problems. Murphey et al. (2013) further suggests that problem-solving skills can be taught through community-based programs and school programs and in this way increase students' resilience.

Resilient individuals have an agency which includes self-esteem as well as inner-directedness, empowering these individuals to view themselves as capable of influencing outcomes and not just as pliant recipients and bystanders of circumstances (Murphey et al., 2013). Resilience is increasingly becoming a prevalent concept in prevention (Coşkun et al., 2014). Literature affirms that developing resilience in students can result in positive results particularly in matters such as school dropout prevalence, career choices, program completion and other factors (Coşkun et al., 2014).

The findings attained from the current research study may possibly benefit current and future citizens of Namibia in that they learn to know more about internal resources that they can mobilise to tackle the problems of life with. The results from this study might enhance Namibian citizens' awareness of positive psychology and provide an understanding of self-esteem, resilience and problem-solving skills in the local context. The research findings may highlight the need for and inform interventions and programmes that may help cultivate these internal resources. Exploring the relationship between self-esteem, resilience and problem-solving skills can provide a pathway towards easier mitigation of difficult life circumstances.

1.6 Limitation of the study

The sample for this study will be drawn from third year students at the Windhoek-based campuses of the University of Namibia, limiting the generalizability of the findings. The study will be cross-sectional with a once-off measure, thus losing the benefits of a longitudinal study with multiple measures. As data will be collected with questionnaires that participants have to complete themselves, self-presentation bias might occur in some responses from participants.

1.7 Delimitation of the study

Registered undergraduate third year students from all the faculties on the Windhoek-based campuses of the University of Namibia in Windhoek will be regarded as the population for this study. A socio-demographic questionnaire will be used to obtain biographical information of the participants, enabling the researcher to explore the differences in levels of self-esteem, resilience, and problem-solving skills between the demographically diverse participants.

1.8 Definitions of concepts

Self-esteem: Various definitions exist for the term “self-esteem”. These definitions commonly involve trust in one’s own capabilities to perform or achieve (Bandura, 1977; Chemers, et al., 2000). The more comprehensive definition of self-esteem refers to a general certainty in one’s ability (Greenacre et al., 2014). "Perceived self-esteem" indicates an individual’s perception that they (themselves) have the ability to master a certain task, resulting from accumulative dealings with their surroundings (National

Research Council, 1994). The definition used in this study thus refers to self-esteem as one's own perception of their abilities.

Resilience: Resilience is the ability to adapt successfully in the face of stress and adversity (Wu et al., 2013). It is the process and result of effectively adjusting to difficult life events, mainly through mental, emotional, and behavioral adaptability and adjustment to external and inner demands. (Wu et al., 2013). Resilience is the capacity and dynamic process of adaptively overcoming stress and adversity while maintaining normal psychological and physical functioning (Russo et al., 2012). For this study the definition of resilience as stated in Murphey et al. (2013), which defines resilience as a person's ability to function capably in spite of life stressors, will be used.

Problem-solving skills: The term "problem-solving skills" as outlined in literature and defined in this study, refers to a person's ability to use rational processes to challenge and resolve extant challenges and situations, across various disciplines and life domains (The Programme for International Student Assessment [PISA], 2003).

1.9 Outline of thesis

This introductory chapter provides background information regarding the research objectives, problem statement, significance of the study and the limitations and delimitations of the current research study. Chapter 2 highlights relevant literature, in order to position the upcoming research within the existing literature and emphasize areas where further research may be needed. Chapter 3 offers clarification and justification for the research methodology utilised, explaining the data collection methods and instruments, along with a particular focus on the procedure and

population parameters used. Chapter 4 presents the descriptive statistics and the results of the statistical analysis, followed by the discussion in Chapter 5. Finally, in Chapter 6, the summary, conclusions, limitations and recommendations will be discussed.

1.10 Conclusion

This chapter provided a synopsis of the current research study. The background of this study conferred the relevant constructs, namely self-esteem, resilience and problem-solving skills, along with its associated implications in the Namibian context. This was followed by a discussion on the present-day challenges in Namibia, related to the relevant constructs of this study. Moreover, a framework of the research objectives as outlined in this chapter seeks to explore the current state of and relations between self-esteem, resilience and problem-solving skills of third year UNAM students studying at the Windhoek-based campuses. The significance of this study was discussed and stipulated amongst others that the findings of this study could possibly help Namibians manage some of life's challenges, through expanding their awareness and knowledge about inner resources. These inner resources are readily available to human beings and can be mobilised by everyone. Lastly, the limitations and delimitation of this study were outlined.

The next chapter will provide a critical analysis of the existing literature regarding self-esteem, resilience and problem-solving skills.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This quantitative study was designed for the purpose of determining and understanding the relationship between self-esteem, resilience and problem-solving skills within the Namibian context, particularly pertaining to university students. The current chapter reviews the literature relating to the broader concepts of self-esteem, resilience and problem-solving skills, as well as previous research studies that focused on the role of self-esteem, resilience and problem-solving skills in general, and in university students. These concepts were researched in order to determine whether a link exists between these three constructs which are more broadly discussed in this chapter.

2.2 An overview of self-esteem, resilience, and problem-solving skills

Walton (2011) proposes that self-esteem can be fundamentally defined as an individual's internal perception of his/her capability to accomplish a particular duty or role in society. Walton (2011) also states that most of the a person's self-esteem is affected and determined by his/her environment in addition to the external world-genetics, childhood experiences, cultural background, and additional situations across one's lifespan. The factors that influence one's self-esteem have different ways of combining and interacting for everyone. Whilst individuals are usually unable to change the past experiences that shaped them, there is plenty that can be done to correct thoughts, beliefs, and perspectives to improve confidence (Markway & Ampel, 2018). Self-esteem configures a fundamental part of both professional and personal success and for some individuals it appears considerably easier than for others (Walton, 2011). Markway and Ampel (2018) proceed to explain that the word

"confidence" is of Latin origins and means "with trust." To act with trust generally entails that a person is not entirely sure of what they are doing and that one must take risks and leaps of faith (Markway & Ampel, 2018).

"Perceived self-esteem" is a term used to indicate the perception that one can master a task, resultant of mounting interactions with the environment (National Research Council, 1994). Self-esteem is thus an individual's own perception of their abilities. According to Markway and Ampel (2018), research has found that self-esteem is interconnected to practically all that a person desires in life. This can range from work success, flourishing relationships, self-worth, life-satisfaction, happiness, and contentment.

Resilience is fundamentally defined as positive adaption as well as a person's capacity to maintain mental health in the face of and to recover from adversity (Herrman et al., 2011). Adversity refers to and includes any negative life event or experience across one's lifespan. This includes but is not limited to poor childcare, poverty, homelessness, traumatic events, natural disasters, violence, war, and physical illness (Herrmann et al., 2011). Graber et al. (2015) refer to resilience as a developmental process that unfolds over time and across different situations. Moreover, resilience is regarded as a developmental construct in the sense that the foundations for adult functioning in terms of resilience are mainly formed by a person's childhood and adolescence as well as in the sense that individual change and growth occurs during the course of life (Graber et al., 2015). Resilience is therefore regarded as a process rather than an outcome.

Psychological research in resilience has found that health-, skills-based-, economic-, societal-, and cognitive mechanisms interact through various stages, life domains, circumstances and adjustments to expedite individual resilience (Graber et al., 2015). There has been significant growth in the domain of resilience research over the past number of decades (Luthar et al., 2012). Resilience research might be instrumental in that it could inform interventions that can benefit at-risk persons to function adaptively, so as to improve their personal and mental well-being, regardless of the countless hardships they have to withstand (Luthar et al., 2012). Numerous studies have confirmed that the resilience of students is related to many diverse factors. It is particularly important in the process of problem-solving (Coşkun et al., 2014). The ability of a person to overcome their problems, their combatant nature or adaptability is also an indication of their resilience (Coşkun et al., 2014).

Problem-solving behaviour is closely associated with personal characteristics. Individuals who have proper problem-solving skills may have improved lives since they are more effective in realising the optimal resolutions and know in what way to behave in problematic circumstances (Coşkun et al., 2014). The Programme for International Student Assessment (PISA) (2003) defines problem-solving skills as a person's ability to use cognitive processes to challenge and resolve existent, cross-disciplinary situations. Kapur (2020) avows that leaders recognize and value problem-solving skills – this is when persons show the capability to resolve problems in an appropriate way and utilize their skills to execute responsibilities well and attain desired goals. Problem-solving skills are essential for university students to overcome numerous issues that recurrently arise in their social lives, yet several studies show

that university students have poor problem-solving abilities that need to be improved (Özreçberoğlu & Çağanağa, 2018).

2.3 The relationship between self-esteem, resilience, and problem-solving skills

According to Riopel (2022) confidence in one's abilities and strengths as well as notable problem-solving skills, are among the central contributing factors to resilience. Moreover, resilience profoundly affects university students' socio-cognitive developmental processes and personalities (Coşkun et al., 2014). An extensive review of literature by Kardaş and Yalçin (2021) shows that the variables of well-being, gratitude, resilience, self-esteem, social support, and fulfilment of psychological needs, are associated with one another at different levels and from varying facets. Research findings suggest that higher levels of social support and self-esteem contribute to the consummation of psychological needs, namely competency, independence, and connection (Kardaş & Yalçin, 2021). Previous research further shows that psychological need fulfilment is linked with individuals' resilience and well-being (Kardaş & Yalçin, 2021). Self-esteem is regarded as a major predictor of well-being and resilience, affecting these two qualities through need fulfilment (Kardaş & Yalçin, 2021).

Research by Rodriques and Pieters (2019) focused on the predictors of satisfaction with life of employees in Namibia. They state that psychological capital is a multifaceted concept related to four constructive psychological resources, namely: self-efficacy, hope, optimism, and resilience. Psychological capital is a person's positive psychological state of development. This development is marked by factors such as: having confidence (self-efficacy) to undertake and dedicate the necessary

effort to succeed at challenging tasks; persevering towards goals and, when necessary, redirecting paths towards one's goals; optimism about current and future success; and being resilient when overcome by problems or difficulty, to attain success (Luthans et al., 2007). These traits embody dynamic workers in the labour force, and this spreads into and across their career and life satisfaction (Rodriques & Pieters, 2019).

A study conducted by Ertekin Pinar et al. (2018), exploring the psychological resilience, self-esteem and problem-solving skills of midwife candidates found that as psychological resilience and self-esteem levels increase, problem-solving skills increase. Moreover, they found that as self-esteem increases, psychological resilience increases as well. Similar studies ascertain that self-esteem relates to well-being and resilience (Yu & Zhang 2007). Çam and Alkal (2020) conducted research on university students' problem-solving skills in relation to personality traits, resilience, and hope. They identified a significant positive association between negative approaches towards problems, poor self-esteem, and reluctance to accept responsibility as well as neuroticism (Çam & Alkal, 2020). These researchers also identified a substantial positive relationship between positive problem-solving approaches and extraversion, cordiality, open-mindedness, accountability, resilience, and hope (Çam & Alkal, 2020).

From the literature it thus seems that there exists a notable link between self-esteem, resilience, and problem-solving skills in university students, as well as other populations.

2.4 The Namibian context

The prosperity of a nation is determined, amongst others, by the proportion of its citizens that are employed in addition to how productive they are. This rests on the skills these persons have and the efficacy with which those abilities are applied (ILO, 2010 cited in Mwinga, 2012). Gonzo (2001) wrote that Namibia is confronted with upsetting numbers of unemployment. Namibia has been (and is still) challenged with many problems and crises such as drought, floods, HIV/AIDS, suicide, numerous pervasive diseases, income inequality, malnutrition, and widespread poverty (Mwinga, 2012). According to Mwinga (2012), the high prevalence of unemployment and underemployment, which has come to be the dominant economic features of Namibia, lies at the core of all these issues. Namibians' daily experiences of poverty, unemployment, limited education opportunities, physical illness, mental illness and hopelessness is the reality for majority citizens. These problems may well be mitigated by improved psychological resources (such as self-esteem, problem-solving skills and resilience). This may in turn enhance educational achievement and employment rates in young adults and have a chain reaction to essentially improve the wellbeing and quality of life for Namibians.

In a national review report on the enactment of the sustainable development goals towards Namibia's vision for 2030, statistics showed that the country faces several challenges, which include, inter alia, low commodity rates, low global demand, persistent drought, distressing levels of unemployment, as well as the topical COVID-19 pandemic (Namibia, 2021). In 2020, Namibia recorded the largest economic decline of 8.0% due to the COVID-19 pandemic, which seems to have worsened the already poor economic development owing to, among other factors, the tenacious

droughts that continue to plague the country (Namibia, 2021). Namibian unemployment rates were reported at 33.4% in 2018, the highest rates existing among the youth at 46.1% (Namibia, 2021). Unemployment means poverty for most unemployed persons (Gonzo, 2001). According to Gonzo (2001), this is an even bigger reality in a country such as Namibia where the jobless do not receive unemployment grants or social welfare aids. Existing literature proves that unemployment disturbs the physical and psychological health of those affected (Gonzo, 2001). Reduced self-esteem remains a prevailing result in virtually every study of employees who get laid-off from work (Gonzo, 2001). As written by Gonzo (2001), as the period of unemployment extends, the individual's self-esteem becomes further reduced. With an increased number of youths entering the work industry and with limited opportunities available, most of these young individuals find themselves without a job (Mwinga, 2012). There are substantial negative consequences (i.e. futile human resources, increasing youth unemployment, probable social and political instability) for the welfare of a country if proper employment is not created to engage young people economically (Mwinga, 2012).

According to Ilhan and Bardakcı (2020), self-esteem empowers individuals to believe that they can overcome any problem in life, based on their inner resources, abilities, intelligence and mental strength. People who are generally self-confident are hopeful, optimistic, and eager to achieve success. They do not avoid problems and are contented in interpersonal relations. Confident people are usually open to new thoughts and experiences, take accountability and have an open-minded and progressive nature (Ilhan & Bardakcı, 2020). These individuals also have a sense of self-respect and self-acceptance. Conversely, low-confidence persons view

themselves as unsuccessful and useless, and they often display helplessness and excessive sensitivity (Ilhan & Bardakcı, 2020). They believe that they cannot solve problems that arise in life, and they suffer from the perpetual stress and angst. Allen and Roberts (2019) state that when challenged with stressful or adverse situations, people tend to act and react in maladaptive ways caused by irrational thoughts. By means of challenging a person's maladaptive cognitions and by developing their problem-solving skills, their resilience is promoted through intellectual flexibility and active coping (Allen & Roberts, 2019). Therefore, successful problem-solving is a feature of resilience and a protective factor for psychological strength. It can therefore be deduced that building problem-solving skills reduces the risk of mental health issues (Allen & Roberts, 2019). Garmsari and Safara (2017) state that problem-solving is an important contributor and predictor of mental well-being; hence problem-solving skills should be strengthened in vulnerable populations.

In view of the past and current economic situation in Namibia, many Namibian citizens are exposed to adverse living circumstances (Mwinga, 2012), which may well reduce their overall well-being. Namibia houses numerous vulnerable groups. Any assistance will bring relief. Therefore, in the absence of access to material resources to lighten the plight of so many suffering Namibians, there seems to be a need to assist people to develop inner (psychological) resources which might provide a toll to people to negotiate better living conditions for themselves. While there is a significant volume research regarding inner resources such as self-esteem, resilience and problem-solving skills available in the global context, there were limited studies conducted on these constructs in the local context. It is believed that a study regarding internal resources can be of value to the people and field of mental well-being in Namibia.

2.5 The importance of self-esteem, resilience, and problem-solving skills for tertiary students

Prior research that focused on social skills, coping, resilience and problem-solving skills in psychology university students reports that when students felt they applied problem-solving effectively, they felt positive with an increased self-esteem and an increased feeling of autonomy (de Almeida Santos & Soares, 2018). Students seemingly construct personal internal resources that deliver more satisfaction and fulfilment to manage difficulties (Juliano & Yunes, 2014). In the cross sectional study by de Almeida and Soares (2018), it was found that all the constructs explored are interrelated, thus highlighting that greater scores on problem-solving skills also produced greater scores on coping strategies (de Almeida Santos & Soares, 2018). Findings by Goldshiri et al. (2023) showed that interventions centered on problem-solving and assertiveness may improve students' self-esteem and mental health. Knowledge of life skills and problem-solving affects different aspects of students' behavior and personality (Golshiri, et al., 2023). It is believed that coping skills such as problem-solving skills help people cope with problems more effectively. Problem-solving skills is essential to obtain behavioral and social health and to have overall successful accomplishment and fulfillment in life (Golshiri, et al., 2023). Moreover, it was found that self-esteem and self-efficacy are some of the most vital factors for optimal personality growth (Golshiri, et al., 2023). According to Goldshiri et al. (2023), self-esteem is regarded as one of the most important elements of mental health as the central and basic component in social-emotional adjustment.

The university environment has been believed to play a central role in cultivating self-esteem (Șar et al., 2010). While attending university, students need to communicate

more effectively, start new initiatives, perform well (or adequately) academically, accept responsibility, and have good social skills (Şar et al., 2010). Individuals who are highly self-confident are pleased with themselves and have a high self-esteem (Şar et al., 2010). Self-confident individuals embrace clear goals. Contrariwise, individuals who struggle with a low self-esteem often experience difficulties in making decisions, taking responsibility, and effectively communicating with others (Şar et al., 2010). Those who have a high self-esteem have been thought to take initiative and to have positive attitudes and good communication skills (Şar et al., 2010). In addition, some of the main qualities that businesses search for when hiring or promoting individuals, are social skills, professionalism, and enthusiasm, which are all derivatives of self-esteem (Lewis, 2020).

Molinero et al. (2018) state that the university setting exposes students to several psychosocial stressors including academic demands and pressure to succeed. University life is thus filled with stressful stimuli that can contribute to psychological distress and reduced accomplishment. Despite the workload, university students are also confronted with different stressors, such as new environments, financial challenges, and adaptation to new social roles and dynamics, which may have a negative influence on their mental well-being (Pidgeon et al., 2014). For that reason, it is imperative to identify which factors may facilitate necessary adjustment, as proper adaptation into student life improves the possibility that students complete their studies, that their academic achievement is appropriate and that they can enjoy higher levels of well-being (Pidgeon et al., 2014).

According to Hako and Shikongo (2019), several factors hamper students to complete their degrees in the prescribed time. As further stated by Hako and Shikongo (2019),

the outcomes of several studies on psychosocial influences identified factors such as stress, motivation, self-esteem, self-efficacy, lack of social support, academic workload, poor academic performance, student adjustment to the environment, mental distress, and adverse life and personal changes as issues that can influence students' capacities to obtain their degrees or qualifications. In the literature, resilience research has gained recognition in clarifying how several students adjust well to the university setting while others face significant difficulties (Molinero et al., 2018). Whereas several students are more resilient, others may experience numerous additional challenges, causing poorer academic performance and in certain instances withdrawal from university (Molinero et al., 2018), also known as "dropouts".

Students are affected by internal factors that impact the interactions between the specific student and the university milieu (Hako & Shikongo, 2019). Poor social support, communal poverty, and the absence of role models or mentors are the main factors impeding academic performance in university students (Hako & Shikongo, 2019). Students' academic performance can thus be regarded as a product of environmental, psychological, and socioeconomic influences (Hako & Shikongo, 2019). Literature has underlined the role of resilience as a protecting factor (Molinero et al., 2018). Resilience is a fundamental internal resource in students in the university environment, as it is positively associated with mental well-being, academic accomplishment, and performance (Allen & Roberts, 2019). As mentioned before, resilience is described as the ability to recuperate, cope, and adjust despite difficulties. Those with high levels of resilience have reported lower levels of psychological distress (Garmsari & Safara, 2017).

Persons who are resilient regularly engage in adaptive coping skills and transform stressful circumstances into opportunities for learning and improvement (Molinero et al., 2018). Students with high resilience levels handle challenging situations by applying problem-solving and coping strategies that result in better academic performance as opposed to students who have low levels of resilience (Molinero et al., 2018). Students with high resilience have been found to adjust better to university; therefore, as a concept grounded in the field of positive psychology, resilience can be understood as a protective factor as it helps to shield students from maladaptive strategies and in turn lessens intensity of academic stress (Molinero et al., 2018). Research shows that resilience can be cultivated, thus institutions can develop academic resilience, enhancing students' capacity to adjust, find balance and improve in response to adversative situations throughout university and beyond (Allen & Roberts, 2019). Better problem-solving produces improved resilience, which fosters better mental well-being, in turn leading to improved academic performance (Allen & Roberts, 2019). Allen and Roberts (2019) acclaim that problem-solving should be fortified in all university students, predominantly those challenged with stress and hardships. Moreover, plans and policies that encourage students and provide support in accessible and useful ways are imperative to student success. Resilience, self-esteem, and problem-solving abilities are considered as assets that significantly influence university students' educational and social fulfilments (Coşkun et al., 2014).

Mcnulty et al. (2015) postulate that although entry into university offers countless opportunities for personal development, students, particularly throughout their first two years of undergraduate study, experience numerous potential university-related stressors as they adjust to their new milieu. Regardless of the prominence of tertiary

education, approximately a quarter of undergraduate students withdraw from university before completing their second academic year (Mcnulty et al., 2015). As students thus seem to still settle in and adapt to university life during their first two years of tertiary studies, the current study used only third year students as participants, as it seems from the literature that third year students are more accustomed to the university setting and student life, as compared to first year and second year students. Additionally, all participants were undergraduate students to safeguard that additional variables amongst undergraduate and post-graduate students do not influence the outcomes.

2.6 Theoretical framework

The theoretical framework upon which this study is based, is the Broaden-and-Build Theory by Barbara Fredrickson. According to Fredrickson (2000), the Broaden-and-Build Theory posits that positive emotions seem to actuate broadened and wide-ranging thought–action tendencies. Positive emotions affect individuals' thoughts and attention, and through generating broadened and expansive attention, they produce flexible and creative thinking and problem-solving processes, which accumulate and build durable cognitive, physical, psychological, and social resources (Fredrickson, 2000). This theory forms part of the positive psychology field. In this sense, this study attempted to find a positive way (focussing on self-esteem, resilience, and problem-solving skills) in which people can deal with the problems of life (unemployment, for example).

According to the Broaden-and-Build Theory, positive emotions elicit increased and expanded cognitive changes that produce improved patterns of decision-making and

actions that reflect growth in social, personal, and intellectual domains (Conway et al., 2012). Over time, these ensuing thought- and behavioural patterns accrue, and construct lasting physical, psychological, intellectual, and social resources (Conway et al., 2012). As stated by Kardaş and Yalçin (2021), improving coordination skills, physical strength, and cardiovascular health are among the physical resources; cultivating resilience, identity and a sense of alignment are examples of psychological resources; intellectual resources include learning new knowledge and developing problem-solving skills; and strengthening interpersonal relations along with establishing new connections are social resources.

The Broaden-and-Build Theory posits that positive emotions broaden persons' momentary thought and behaviour repertoire, allowing them to think and act adaptably and flexibly when needed (Kardaş & Yalçin, 2021). This sets the foundation of social, cognitive, physical, and psychological resources for individuals (Kardaş & Yalçin, 2021). In contrast, negative emotions restrict a person's transitory intellectual and behavioural inventory, causing them to choose and act impulsively (Kardaş & Yalçin, 2021). This means that positive emotions and reflecting upon constructive experiences help enhance positive thinking. Positive thinking creates more alternatives on ways to respond to circumstances and challenges. This broadened mindset is helpful when confronting any difficulties that may come about. Negative emotions prompt restricted and instant behaviours. Instead, positive emotions do not have any instantaneous survival value, because they turn one's attention away from immediate needs and concerns. However, in due course, the resources and abilities assembled by extended behaviours improve the individual's functioning.

Hobfoll's (1989) Conservation of Resources (COR) theory proposes that people are driven to obtain, safeguard, and preserve resources. Resources refer to everything that an individual values. As stated by Hobfoll (1989), resources can be categorised as material (objects or possessions such as a house or a car), circumstances (such as employment and health), individual characteristics, (such as self-esteem, optimism, resilience, hope, problem-solving skills, mastery, and knowledge), and social (such as support and connection). According to this theory, stress occurs when a person's resources are endangered or depleted (Hobfoll, 1989). A stress reaction is marked by an attempt chiefly to limit losses and to maximize gains, which ultimately motivates human behavior in the face of stress (Hobfoll, 1989). Moreover, the COR theory states that losing one's resource has a considerably stronger effect on the individual than acquiring resources (Hobfoll, 1989). This means that resource loss overshadows resource gain, as the loss of resources has been found to be meaningfully linked with psychological distress, while gaining resources has a limited positive effect on psychological distress. In addition, the COR theory states that persons should invest in resources to prevent and repair resource loss, plus gain new resources (Hobfoll, 1989). Resource acquisition is found to be a coping mechanism intended to avert future losses, and by investing in resources, one is able to more effectively handle stressors (Hobfoll, 1989). For example, an individual should explore creative ways in which to resolve issues, adopt a positive attitude, be flexible, and reach out to their social support network in times of stress or crisis. These constructive actions then help people to build more resources and can serve as buffers to future stressful circumstances.

As explained by Fredrickson (2001), positive emotions build one's lasting physical, social, psychological, and cognitive resources, and these resources outlast the emotions which they stem from. According to Conway et al. (2012), these resources build up gradually, resulting in progress across various developmental domains, increasing the individual's overall well-being. Those who experience more, and intense positive emotions have greater life satisfaction because positive emotions enable them to cultivate positive perceptions of themselves and to develop new approaches to resolve challenges (Cohn et al. 2009). The experience of positive emotions increases perceived social support and affirmative self-assessment, leading to enhancement of self-esteem. Self-esteem in turn promotes the fulfilment of psychological needs such as relatedness, independence, autonomy, and competence. Satisfaction of psychological needs is conducive to boosting resilience and psychological well-being (Kardaş & Yalçin, 2021).

Research indicates that those who experience more positive emotions throughout a certain period of time show improved resilience and life satisfaction (Conway et al., 2012). Reportedly, the link between positive emotions and increased life satisfaction is mediated by increases in resilience (Conway et al., 2012). This indicates that experiences of positive emotions help individuals enhance their quality of life through forming the important inner resource, called resilience (Conway et al., 2012). Fredrickson (2001), focusing on the effects of positive emotions on resilience, stated that positive emotions increase resilience by enabling individuals to be more influential and dynamic when they are confronted with a challenge (Kardaş & Yalçin, 2021). Positive emotions enable individuals to think more flexibly and innovatively, helping them to cope with negative situations in a more effective manner (Kardaş &

Yalçin, 2021). Ultimately, this empowers them to recuperate deftly after hardships and to develop psychological fortitude despite adversities (Kardaş & Yalçin, 2021).

Essentially, thinking broadly develops resilience over time. Persons who exhibit resilience are honed to successfully balance negative emotions with positive ones. Higher resilience then leads to a greater well-being and ultimately generates an upward spiral of positive thoughts. The primary factor in resilience is the ability of handling both regular and heightened levels of stress (Conway et al., 2012). There are several other factors, which improve and maintain one's resilience, such as the ability to make realistic plans and the capability of taking action and implementing those plans; an affirmative self-concept and confidence in one's strengths and abilities; communication and problem-solving skills; and the capacity to regulate and manage intense emotional states and impulses (Kardaş & Yalçin, 2021). When faced with adversity individuals with low resilience are more easily distressed and are less proficient in returning to balanced levels of daily functioning (Conway et al., 2012). On the other hand, when faced with adversity, highly resilient individuals have the capability to adjust efficiently, providing them the flexibility required for adapting to and resolving stressors in their lives. This can eventually lead to improved work performance, better interpersonal relationships, and enhanced overall well-being (Conway et al., 2012).

2.7 Conclusion

The current study intended to explore the relationship between self-esteem, resilience, and problem-solving skills within the Namibian context, mainly pertaining to the Namibian youth (in particular third year students of the University of Namibia).

Chapter 2 reviewed the existing literature pertaining to self-esteem, resilience, and problem-solving skills. Firstly, it provided an overview of self-esteem, resilience, and problem-solving skills in general, followed by a discussion on the relations between these constructs. Next, this second chapter conferred the reality faced by Namibians, as well as self-esteem, resilience, and problem-solving in this framework. In addition, the importance of self-esteem, resilience, and problem-solving skills for university students was conversed. Finally, this chapter contained theory and research on the theoretical framework of the study referring to the Broaden-and-Build Theory (Fredrickson, 2001) and the Conservation of Resources theory (Hobfoll, 1989).

The following chapter (Chapter 3) will outline the methodology applied in this study and provide an explanation of the research design, population, sampling methods, sample, research instruments, procedures, data collection methods, and data analysis techniques used in the study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology employed for this study, along with the methods followed in conducting this study. The research methods described in this chapter were used to meet the aim and objectives of this study. This chapter provides a framework of the research design, population, and sampling. Additionally, the research instruments that were used are discussed, as well as the procedures followed while conducting this study and collecting the necessary data. This is followed by a discussion of the data analysis process. Finally, this chapter concludes with a presentation of the pertinent ethical considerations for this study.

3.2 Research design

According to De Vos et al. (2011), the research design can be defined as the plan a researcher employs to collect data, and then using the gathered data to acquire the sought information, formulate the findings and derive some pertinent conclusions. This study followed a quantitative research strategy. Quantitative research centres on collecting numerical data and generalizing it across different groups to explain certain phenomena (Babbie, 2010). It also investigates independent theories by examining the association between variables. By placing prominence on greater sample sizes, quantitative research enables researchers to generalize findings (Creswell & Creswell, 2018). In quantitative research, data is gathered through interviews, surveys, or questionnaires. The collected data is then analysed and interpreted through statistical means (Creswell & Creswell, 2018). A quantitative research strategy was deemed appropriate for the current study, as this study sought to obtain numerical data through questionnaires and then analysing and interpreting

the collected data through statistical means. The researcher then intended to generalise these findings across the Namibian population, especially to the youth, to explain the value of the phenomena of self-esteem, resilience and problem-solving in the local context. The current study also aimed to examine the association between these variables. Using a large sample size enabled the researcher to generalize findings obtained through this study, across the larger Namibian population.

For this research study a non-experimental, correlational research design was employed. Non-experimental research refers to research that involves no random assignment of participants as well as no active implementation or manipulation of any intervention by the researcher (Cook et al., 2008). The reason for selecting a non-experimental design for this study is that no random assignment of participants took place and no active manipulation, nor any intervention was implemented by the researcher.

Correlational research is a non-experimental research design that enables the researcher to determine the extent to which two or more variables or constructs are related or in correlation with one another (Creswell, 2012). In the case of this study, it made sense to make use of a correlational design as the researcher sought to determine the way and degree to which self-esteem, resilience, and problem-solving abilities are related to one another.

The study is cross-sectional, as data was collected at one particular occasion. The researcher decided to make use of the cross-sectional design as no intervention or manipulation of variables was introduced, therefore it was not required to collect data

on several occasions. Moreover, the researcher sought to determine the levels of certain phenomena within a particular population at a certain point in time, as well as the associations between these phenomena. This only requires that data be collected on a single occasion.

A deductive research approach was followed as the researcher started from a set of general theories and then drawing specific conclusions regarding self-esteem, resilience, and problem-solving skills. The researcher started with a theory, collected data to assess it, and reflected on its confirmation or disconfirmation by the results. The theory formed a framework for the entire study (Creswell & Creswell, 2018). The foundationalist ontology along with a positivist epistemology is relevant to this study. In line with the deductive approach, constructing knowledge in foundationalism involves deducing or inferring new beliefs from the foundational beliefs using logical reasoning (Grix, 2002). Foundationalism postulates that knowledge is structured hierarchically, with certain foundational beliefs as the starting point for all other beliefs (Grix, 2002). It refers to the notion that some of one's beliefs are justified by reference to others. It suggests knowledge and justified beliefs are built upon a foundational set of definite or self-evident beliefs or realities. According to foundationalism, these foundational beliefs are the ultimate basis for all other knowledge and beliefs (Grix, 2002). Foundationalists also affirm that some beliefs are inherently justified and do not require support from other beliefs. These foundational beliefs regularly form a secure foundation upon which the entire structure of knowledge is created (Grix, 2002). From this view, it can be stated that individuals construct their beliefs and reality based on existing, justified beliefs. In this study, it can be said that participants' knowledge is constructed through the beliefs they hold

about the world and themselves, specifically their self-esteem, resilience, and problem-solving skills.

Foundationalism states that the world is existent independent of individuals' knowledge thereof, leading to a positivist epistemology which is the belief that knowledge can be discovered through valid conceptualisation and reliable measurement (Grix, 2002). Positivism submits that reality is objectively assumed and is measurable using resources which are independent of the researcher (Grix, 2002). This essentially means that knowledge is objective and quantifiable. Positivists adopt scientific methods and structure the knowledge generation process through quantification to improve accuracy in the explanation of factors and the association between them (Grix, 2002). In this regard, the researcher intended to obtain knowledge regarding self-esteem, resilience, and problem-solving in the Namibian context, by quantitatively measuring these variables, to explain these variables and the correlations among them.

3.3 Population

A population can be defined as consisting of a particular group of individuals from which a sample and data will be collected (Coolican, 2013). The population for this research study consisted of all third-year students at Windhoek-based campuses of the University of Namibia (Main Campus, Hage Gaingob Campus, Neudamm Campus and Khomasdal Campus). Research by Coşkun et al. (2014) avows that resilience and problem-solving skills are regarded as qualities that greatly affect university students' social and educational attainments. Additionally, the reason for selecting third-year students only is because third-year level students are likely to be better adapted with

regards to self-esteem, resilience, and problem-solving skills, compared to first-year students for example. This is since students are likely to experience numerous university-related stresses, mainly throughout their first two years of undergraduate study, as they adjust to their new, unfamiliar environment (McNulty et al., 2015). Furthermore, all participants were undergraduate students to ensure that differences between undergraduate and post-graduate students do not affect the results. A total of 3063 third-year students are registered at Windhoek-based campuses in 2023 (UNAM, 2023).

3.4 Sampling

Neuman (2014) defines a sample as comprising of a smaller number of cases from which generalizations can be made across the bigger population from which they were drawn. The sample size for this study was calculated using a 95% confidence level, 5% margin of error, 50% population proportion and a population size of 3063. A sample size of 322 participants is indicated to be appropriate for the population of 3063. This agrees with Gay and Diehl (1992) who recommend that the sample should be made up of about 10% of the population (in the case of this study thus 306). Salkind (1997) cautions that response rates are typically well below 100% and therefore researchers should increase the sample size by 40-50% to account for lost questionnaires and uncooperative participants. The sample size of this study was thus set at 466 (322 + 144). For the sample to be proportionally equal across campuses, third year numbers were converted to proportions (Table 1, Column 3). To remain gender-sensitive, the proportion of participants per campus was equally divided for male and female participants (Table 1, columns 4 and 5).

Table 1

Sample Distribution

Campus Name	Count of 3rd year students	Reworked proportion n= 466	Female participants to be sampled per campus	Male participants to be sampled per campus
Hage Geingob campus	211	32	16	16
Khomasdal campus	171	26	13	13
Neudamm campus	57	8	4	4
Main campus	2624	400	200	200
Grand Total	3063	466	233	233

The non-probability sampling technique convenience sampling was used to sample participants for this study. Convenience sampling is also called availability sampling (Neuman, 2014). In this sampling method the primary criteria for selecting participants are that they easily reachable, readily available, and this method is convenient (Neuman, 2014). The reason for using convenience sampling for the present study was to enable the researcher to collect data promptly given the time constraint of the study (Neuman, 2014). Moreover, convenience sampling is a low cost method (Neuman, 2014).

3.5 Research instruments

The following research instruments were used to collect the data for this study: Rosenberg Self-Esteem Scale (RSES), the Connor–Davidson Resilience Scale (CD-RISC), and the Problem Solving Inventory (PSI), in addition to a self-designed socio-demographic questionnaire.

3.5.1 The Rosenberg Self-Esteem Scale (RSES)

The Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) consists of five positive and five negative items that depict a positive and a negative self-image. This instrument has been translated into many languages and also applied to several different cultural contexts (Mannarini, 2010). Usually, higher scores on the RSES point toward better levels of positive self-esteem (Mannarini, 2010). An example of an item on this scale is "I take a positive attitude toward myself". Although the RSES has not been validated in Namibia, it has been validated in nearby African countries, such as South Africa (Westaway et al., 2015), and has been broadly used in African research studies (Schmitt & Allik, 2005). Kalomo et al. (2021) calculated the internal consistency of the RSES by means of Cronbach's Alpha ($\alpha = .72$).

3.5.2 Connor–Davidson Resilience Scale (CD-RISC)

The Connor–Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003)) is considered a favourable instrument for measuring adults' levels of resilience (Karaırmak, 2009). According to Connor and Davidson (2003) the CD-RISC Scale consists of five dimensions (personal competence, high standards, and tenacity; trust in one's instincts, tolerance of negative affect, and strengthening effects of stress; positive acceptance of change and secure relationships with others; control; spiritual influences). The CD-RISC comprises 25 items - scored on a 5-point Likert scale. The CD-RISC-10 is comprised of ten of the original 25 items from the CD-RISC Scale each of which are scored on a 5-point Likert scale ranging from 0 (not true at all) to 4 (true nearly all of the time). An example of an item on this scale is "I can deal with whatever comes my way". A study by Van der Merwe et al. (2020) found Cronbach's alpha values of 0.91 and 0.92 for pre-clinical and clinical groups of South African

university students using the CD-RISC 25. Moreover, Jørgensen and Seedat (2008) reported an alpha coefficient of 0.93 for a diverse group of South African adolescents. Findings by Marx et al., (2017), found a reliability coefficient of .94 in a study with South African adults. For this study, the CD-RISC (comprising of 25 items) was used.

3.5.3 The Problem Solving Inventory (PSI)

The Problem Solving Inventory (PSI) (Heppner & Petersen, 1982) consists of 35 items and three dimensions namely problem-solving confidence (PSC), approach-avoidance style (AAS) and personal control (PC), as well as three filler items. The inventory measures a person's views and appraisals of her/his problem-solving abilities as well as her/his problem-solving style (Heppner & Petersen, 1982). The PSC (11 items) is defined as an individual's self-assurance, a belief, and trust in a wide range of one's problem-solving activities (e.g., "I am usually able to think up creative and effective alternatives to solve a problem." (Heppner et al., 2002). The AAS (16 items) refers to a general tendency to approach or avoid different problem-solving activities (e.g., "When a solution to a problem was unsuccessful, I do not examine why it didn't work.") (Heppner et al., 2002). The PC (5 items) is defined as believing one is in control of one's emotions and behaviors while solving problems (e.g., "I make snap judgments and later regret them.") (Heppner et al., 2002). Higher functionality is indicated by lower scores on each factor and ultimately on the total score of this measure (Heppner & Petersen, 1982). A reliability coefficient of .84 was reported by Pretorius (1996) in a sample of South African university students (cited in Heppner et al., 2002). Heppner et al., (2002) found a Cronbach's alpha of .89 in their study on the generalizability of the PSI to South African Black college students. They established that the PSI and the three

factors have satisfactory levels of internal consistency in the South African sample (Heppner et al., 2002).

3.5.4 Socio-demographic questionnaire

A socio-demographic questionnaire was utilised to capture socio-demographic/biographical information of the participants. The socio-demographic questionnaire used in this study was a customized, self-report questionnaire, consisting of six questions. This socio-demographic questionnaire was administered to obtain data on each participant's age, gender, and field of study in addition to other information.

3.6 Procedure

Ethical clearance was obtained from UNAM's Faculty of Health Sciences and Veterinary Medicine's Decentralized Research Ethics Committee. According to UNAM rules, when ethical clearance is permitted, the researcher may use UNAM students as research participants (with the students' informed consent and provided that the students are at least 18 years of age or older). The procedure entailed that the supervisor requested permission from the computer centre to obtain and use student information (email addresses). The email addresses of all the registered third year students across the four faculties were obtained from the UNAM Computer Center.

The data collection for this study was done by the researcher by means of self-report methods. This entailed that the participant reported on his/her own experience (Bless et al., 2013). All questionnaires along with attached explanation of the study and informed consent forms, were sent to all the participants. Questionnaires and informed

consent forms were completed by the participants after distribution via email to all the respondents and completed forms were sent back to the researcher via email. Upon completion, the questionnaires were accessible to the researcher (Bless et al., 2013).

The researcher first ensured that the consent form that was attached to the research questionnaire and was signed before the researcher proceeded with data capturing and finally data analysis. The data collection process lasted approximately three months. Many frustrations plagued the data collection process. For example, numerous student email addresses obtained, did not exist anymore. A total of 3043 emails were sent out, and due to the numerous challenges with the data collection process, the response rate was only 10%.

3.7 Data analysis

Descriptive statistics were used by the researcher to analyse data regarding socio-demographic/biographical information of the participants. The means obtained for the different items and constructs were used to determine the levels of self-esteem, resilience, and problem-solving skills of the participants. Pearson correlations were applied to find the relationships (if any), the strength and the direction of the relationships between the constructs self-esteem, resilience and problem-solving skills. Independent samples t-tests were used to find possible differences in the levels of self-esteem, resilience, and problem-solving skills between male and female students. A simple regression analysis was used to determine which one of self-esteem or resilience contributes the most to the variance in problem-solving skills of third year students at the University of Namibia. A mediation analysis was conducted to investigate whether resilience mediates the relationship between self-

esteem and problem-solving skills. The data analysis was done by means of the SPSS (Statistical Package for Social Sciences) (IBM Corp, 2022) software. The mediation analysis was done via the PROCESS macro extension in SPSS (Uedufy, 2023).

3.8 Research ethics

The researcher obtained ethical clearance from the University of Namibia's Faculty of Health Sciences and Veterinary Medicine's Decentralized Research Ethics Committee (Ethical Clearance Reference Number: SAH02/23) which included the permission to collect data from UNAM students. The participants were fully informed about the nature of the study and were provided with enough information to make an informed decision as to whether or not they wished to participate in this research study. As part of this explanatory information, participants were assured regarding their right to privacy and that they could withdraw from the study at any time, without any negative consequences. All of this information was distributed to the participants via email, in an additional brochure accompanying the questionnaires. In this regard, Wells (2016) affirms that tracing an IP address through email addresses is a difficult (at times unmanageable), lengthy, and expensive process.

Confidentiality was maintained in that downloaded and collected data is stored electronically in a password-locked file to which only the researcher has access. No information about the participants was shared with anyone. The data will remain stored for five years, whereafter it will be formatted. In addition, a coding system was used for the completed questionnaires so that names of all participants are withheld, thereby protecting participants' right to privacy and anonymity.

3.9 Conclusion

The present chapter provided an explanation and justification of the research methodology used in the current study. This section explained the research design, population, sampling methods, research instruments utilised, data collection procedures, and data analysis techniques, as well as the ethical considerations pertaining to the study.

The following chapter (Chapter 4) presents the findings of the study, using tables to illustrate the data. It provides the descriptive statistics and the results of the statistical analysis.

CHAPTER FOUR: RESULTS

4.1 Introduction

The data for this study was collected and analysed as discussed in Chapter 3 utilising a quantitative research paradigm with a non-experimental, correlational research design. This chapter will thus present the data for the study. First, it will discuss the biographical information of the participants, specifically their age, gender, campus, and faculty of study, as well as their region of origin. The Cronbach's alpha for the RSES, PSI and CD-RISC will be provided and results from these questionnaires will then be discussed by looking at the overall levels of self-esteem, resilience and problem-solving skills that were measured by these questionnaires. Additionally, possible correlations will be examined between the different variables, namely self-esteem, resilience, and problem-solving skills. The differences in the levels of these three constructs between male and female participants will also be conferred. Finally, this chapter will indicate the impact of self-esteem and resilience on participants' overall level of problem-solving skills.

4.2 Descriptive statistics

A sample of 322 participants (10% of the population) with an additional 144 participants (to make up for participants who could potentially withdraw from the study for the one or other reason) was envisioned for this study. The data collection process indeed became a tedious task so that in the end the researcher managed to collect data from 326 participants, which still meets the 10% sample of the total population. Participants who took part in this quantitative study were asked to indicate their age, gender, campus, faculty, and home region. Although all this descriptive data was not necessary for the data utilised for this thesis, the additional descriptive data

will be used for the writing of further academic articles. The results of the descriptive statistics are presented in Table 2.

Table 2

Descriptive statistics (N = 326)

Variable	Category	Frequency (N)	Percentage (%)
Age	18-24	231	70.9
	25-34	76	23.3
	35-44	13	4.0
	45 and above	6	1.8
Gender	Male	88	27
	Female	238	73
Campus	Main campus	274	84
	Khomasdal campus	18	5.5
	Hage Geingob campus	26	8.0
	Neudamm campus	8	2.5
Faculty	Agriculture, Engineering and Natural Sciences	39	12.0
	Commerce, Management and Law	80	24.5
	Education and Human Sciences	116	35.6
	Health sciences and Veterinary medicine	91	27.9
Region	Kunene	8	2.5
	Omusati	39	12.0
	Oshana	34	10.4
	Ohangwena	32	9.8
	Oshikoto	30	9.2
	Kavango East	8	2.5
	Zambezi	13	4.0
	Erongo	31	9.5
	Otjozondjupa	19	5.8
	Omaheke	12	3.7
	Khomas	66	20.2
	Hardap	5	1.5
	Karas	10	3.1
	Kavango West	6	1.8
	Non-Namibian	13	4.0

The age ranges of the participants represented in Table 2 indicates that 70.9% of the participants were between the ages of 18 and 24 years, 23.3% were between the ages

of 25-34, 4% were between the ages of 35-44, and 1.8% were above the age of 45 years. Of the 326 participants surveyed for this study, 27% were male and 73% were female. Also, as shown in Table 2, 84% of the participants were studying at Main Campus (mostly Law, Humanities, Commerce, Science, in Windhoek), 5.5% were studying at Khomasdal Campus (Education, in Windhoek), 8% at Hage Geingob Campus (Medical, Allied Health Sciences, Veterinary Science, in Windhoek), and 2.5% of the participants were studying at Neudamm Campus (Agriculture, 20 km East of Windhoek). Furthermore, of the 326 participants, 12% were studying in the Faculty of Agriculture, Engineering and Natural Sciences and 24.5% were studying in the Faculty of Commerce, Management and Law. 35.6% were studying in the Faculty of Education and Human Sciences, and 27.9% in the Faculty of Health Sciences and Veterinary Medicine. The participants' regions of origin, represented in Table 2, indicated the following: Kunene 2.5%, Omusati 12%, Oshana 10.4%, Ohangwena 9.8%, Oshikoto 9.2%, Kavango East 2.5%, Zambezi 4%, Erongo 9.5%, Otjozondjupa 5.8%, Omaheke 3.7%, Khomas 20.2%, Hardap 1.5%, Karas 3.1%, and Kavango West 1.8%. Some 4% of the participants indicated that they were not from Namibia.

4.3 Reliability of the scales

A reliability analysis was carried out with the Rosenberg Self-Esteem Scale comprising of 10 items, the Problem-Solving Inventory comprising of 32 items, and the Connor-Davidson Resilience Scale comprising of 25 items. Reliability analysis was also carried out on the sub-scales of the Problem-Solving Inventory and the Connor-Davidson Resilience Scale. The results can be seen in Table 3.

Table 3

Cronbach's alpha and mean scores for scales and sub-scales

Scales	Alpha level	Maximum	Mean	Mean %	Standard Deviation
Rosenberg Self-Esteem Scale	.827	40	30	75	5.055
Problem-Solving Inventory	.842	192	131	68	18.716
Problem-solving Confidence	.754	66	49	74	7.772
Approach Avoidance Style	.740	96	65	67	10.437
Personal Control	.600	30	16	53	4.835
Connor-Davidson Resilience Scale	.864	100	69	69	13.079
Positive attitude to change and secure relationships	.582	20	14	70	3.241
Handling negative emotions, trusting one's instincts, perceived benefits of stress	.606	28	16	57	4.295
High standards, tenacity, competence	.783	32	23	71	5.200
Perceived control	.652	12	8	66	2.696
Spirituality	.497	8	6	75	1.180

The Cronbach alpha coefficient values for the majority the scales and sub-scales in this study are acceptable, as can be seen in Table 3. Especially the main scales were found to show high reliability with the Rosenberg Self-Esteem Scale at .827, the Problem-Solving Inventory at .842 and the Connor-Davidson Resilience Scale at .864. Two of the sub-scales of the Connor-Davidson Resilience Scale showed lower reliability with the *Positive attitude to change and secure relationships* at .582 and

Spirituality at .497. Hinton et al. (2014) indicate that a reliability coefficient between .50 and .70 can still be regarded as moderate.

4.4 Mean scores of the variables

Mean scores were transformed to percentages to indicate strength of variables. Mean scores can be converted to percentages that indicate the average percentage of the score relative to the total score (Ha, 2020). Mean scores can also be transformed to percentages to show the performance of a score relative to a specific score (Ha, 2020). The percentage therefore indicates the strength of the variable measured.

Third year students at the Windhoek campuses of the University of Namibia indicated that they feel significantly positive about themselves and that they have an above average sense of self-worth (75%). These students feel that their problem-solving skills are good (68%). Specifically, these students indicate that they feel confident about their ability to solve problems (74%), and that they carefully (but probably not overly eager) approach problems rather than to avoid them (67%). However, the students in this study indicate that their self-control/self-discipline is not high (53%). Furthermore, third year students at the University of Namibia feel that they have above average resilience levels (69%). As part of their resiliency, the participants indicated that they deal in a positive way with change and that their general relationships are secure (70%). However, the participants in this study indicated that they are not too confident with handling negative emotions, trusting their own instincts, and seeking the benefits of stress (57%). The third year students who participated in this study also indicated that they feel that they maintain high standards in life, that they feel competent and that they display tenacity in their tasks (71%). Also, as part of their

resilience levels, participants indicated that they feel adequately in control of life (66%). Higher levels of spirituality were found with the participants (75%).

4.5 Relationships between Self-Esteem, Resilience and Problem-solving skills

Pearson correlation coefficients were computed to assess the relationships between the scales and the sub-scales that were used in this study. The results are reported in Table 4.

Table 4

Pearson correlation coefficients of the scales and sub-scales

Variable	*n*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Total self-esteem	326	-										
2. Total problem-solving	326	.438**	-									
3. Problem-solving confidence	326	.460**	.813**	-								
4. Approach /avoidance style	326	.251**	.895**	.533**	-							
5. Personal control	326	.416**	.633**	.344**	.415**	-						
6. Total resilience	326	.522**	.552**	.519**	.437**	.359**	-					

7.	Positive attitude to change and secure relationships	326	.289**	.412**	.399**	.322**	.257**	.728**	-			
8.	Handling negative emotions, trusting one's instincts, perceived benefits of stress	326	.267**	.378**	.343**	.320**	.221**	.773**	.462**	-		
9.	High standards, tenacity, competence	326	.550**	.557**	.528**	.424**	.395**	.875**	.501**	.527**	-	
10.	Perceived control	326	.613**	.417**	.404**	.298**	.322*	.786**	.442**	.460**	.707**	-
11.	Spirituality	326	.736**	.294**	.333**	.165**	.246**	.403**	.271**	.208**	.410**	.454**

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

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

From the findings depicted in Table 4, a significant moderate positive correlation between self-esteem and problem-solving skills ($r = .438$, $p < .01$) can be seen. A significant strong positive correlation between self-esteem and resilience ($r = .522$, $p < .05$) can be observed. Moreover, a significant strong positive correlation exists between problem-solving skills and resilience ($r = .552$, $p < .05$). Moreover, significant strong positive correlations were found between total resilience and problem-solving confidence ($r = .519$, $p < .05$), while moderate positive correlations were found amid total resilience and approach-avoidance style ($r = .437$, $p < .05$) as well as personal control ($r = .359$, $p < .05$).

Focussing on the factors of the CD-RISC, moderate positive correlations were found amid “positive attitude to change and secure relationships” and total problem-solving skills ($r = .412$, $p < .05$), problem-solving confidence ($r = .399$, $p < .05$), as well as approach-avoidance style ($r = .322$, $p < .05$), while a small positive correlation was found with personal control ($r = .257$, $p < .05$).

In addition, moderate positive correlations can be seen amongst “handling negative emotions, trusting instincts and perceived benefits of stress” and total problem-solving ($r = .378$, $p < .05$), problem-solving confidence ($r = .343$, $p < .05$), and approach-avoidance style ($r = .320$, $p < .05$), while a small positive correlation was found with personal control ($r = .221$, $p < .05$).

Significant strong positive correlations between “high standards, tenacity and competence” and total self-esteem ($r = .550$, $p < .05$), total problem-solving ($r = .557$, $p < .05$), as well as problem-solving confidence ($r = .528$, $p < .05$) can be observed. Significant moderate positive correlations between “high standards, tenacity and competence” and approach-avoidance style ($r = .424$, $p < .05$), in addition to personal control ($r = .395$, $p < .05$), were established.

Furthermore, a significant strong positive correlation between “perceived control” and total self-esteem ($r = .613$, $p < .05$), was found. Significant moderate positive correlations between “perceived control” and total problem-solving scores ($r = .417$, $p < .05$), problem-solving confidence ($r = .404$, $p < .05$), approach-avoidance style ($r = .298$, $p < .05$), as well as personal control ($r = .322$, $p < .05$) were recognised.

Finally, a significant strong positive correlation was found between "spirituality" and total self-esteem ($r = .736$, $p < .05$), while moderate positive correlations were found with total problem-solving ($r = .294$, $p < .05$), and problem-solving confidence ($r = .333$, $p < .05$). Small positive correlations between "spirituality" and approach-avoidance style ($r = .165$, $p < .05$), as well as personal control ($r = .246$, $p < .05$), can be observed.

4.6 Gender Differences with regards to Self-Esteem, Problem-Solving Skills and Resilience

An independent-samples t-tests was used to compare the mean scores of male and female participants for self-esteem levels. The results are depicted in Table 5.

Table 5

T-test for gender differences in self-esteem (SE)

	Gender						95% CI for Mean Difference			
	Male			Female						
	M	SD	N	M	SD	N		t	df	**p
SE	31.03	5.42	88	30.70	4.91	238	-.90, 1.57	.53	323	.59

** Difference is significant if p ≤ 0.05 (2-tailed)*

Results from the independent-samples t-test show no statistically significant difference for the self-esteem levels of male and female third year university students at the Windhoek based UNAM campuses in Namibia.

An independent-samples t-test was used to compare the mean scores of male and female participants for problem-solving skills levels. The results are depicted in Table 6.

Table 6

T-test for gender differences in problem-solving (PS) skills

	Gender						95% CI for Mean Diffe-rence			
	Male			Female						
	M	SD	N	M	SD	N		t	df	**p
PS Skills	133.47	20.14	88	130.14	18.15	238	-1.26, 7.92	1.42	323	.15

** Difference is significant if p ≤ 0.05 (2-tailed)*

Results for the independent-samples t-test show no statistically significant difference for the problem-solving skills levels for male and female third year university students at the Windhoek based UNAM campuses in Namibia.

An independent-samples t-test was used to compare the mean scores of male and female participants for resilience levels. The results are depicted in Table 7.

Table 7

T-test for gender differences in resilience

	Gender						95% CI for Mean Diffe-rence			
	Male			Female						
	M	SD	N	M	SD	N		t	df	**p
Resi-lience level	69.94	13.91	88	69.76	12.70	238	-3.02, 3.38	.11	323	.91

** Difference is significant if p ≤ 0.05*

Results for the independent-samples t-test show no statistically significant difference for the resilience levels for male and female third year university students at the Windhoek based UNAM campuses in Namibia.

4.7 Impact of Self-Esteem and Resilience on Problem-Solving Skills

A standard multiple regression analysis was performed to test the impact of independent variables (self-esteem and resilience) on problem-solving skills. The results are reported in Table 8.

Table 8

Regression analysis with self-esteem and resilience as the independent variables and problem-solving skills as the dependent variable

Variable	Problem-Solving Skills
Constant	63.21**
Self-esteem	.20**
Resilience	.44**
R^2	.33
F	81.59**

* $p < .05$
** $p < .01$

The regression output shows that self-esteem and resilience explain 33% (R^2 = .33) of the variance in problem-solving skills in third year university students at the Windhoek based UNAM campuses. Standardised beta values indicate that self-esteem (β = .20, *p* < *.01)* and resilience (β = .44, *p* = < .01) contribute significantly towards the variance in problem-solving skills of the students. Resilience (β = .44) makes the strongest unique contribution to explaining problem-solving skills (dependent variable), when the variance explained by all other variables in the model is controlled for.

Although not part of the formal objectives of this study, a standard multiple regression analysis was also performed to test the impact of independent variables, which consist of the sub-scales of the CD-RISC Scale (positive attitude, handling negative emotions, high standards, control, and spirituality) on problem-solving skills. The results are reported in Table 9.

Table 9

Regression analysis with independent variables (positive attitude, handling negative emotions, high standards, control and spirituality) and problem-solving skills as the dependent variable

Variable	Problem-Solving Skills
Constant	70.01**
Positive attitude	.15**
Handling negative emotions	.07
High standards	.42**
Control	-.02
Spirituality	.07
R^2	.34
F	33.30**

* *p* < .05
** *p* < .01

The regression output shows that independent variables positive attitude, handling negative emotions, high standards, control, and spirituality explain 34% ($R^2 = .34$) of the variance in problem-solving skills (dependent variable) in third year university students at the Windhoek based UNAM campuses. Standardised beta values indicate that positive attitudes ($\beta = .15$, $p < .01$) and high standards ($\beta = .42$, $p < .01$) contribute significantly towards the variance in problem-solving skills of the students. High standards ($\beta = .42$) makes the strongest unique contribution to explaining problem-solving skills (dependent variable), when the variance explained by all other variables in the model is controlled for. Handling negative emotions, control and spirituality do not contribute significantly to the variance in problem-solving skills.

Although not part of the formal objectives of this study a standard multiple regression analysis was also performed to test the impact of independent variables, which consist of the sub-scales of the CD-RISC Scale and self-esteem (self-esteem, positive attitude, handling negative emotions, high standards, control, and spirituality) on problem-solving skills. The results are reported in Table 10.

Table 10

Regression analysis with independent variables (self-esteem positive attitude, handling negative emotions, high standards, control and spirituality) and problem-solving skills as the dependent variable

Variable	Problem-Solving Skills
Constant	61.65**
Self-esteem	.28**
Positive attitude	.16*
Handling negative emotions	.09
High standards	.37**

Control	-.09
Spirituality	-.08
R^2	.36
F	31.14**

* $p < .05$
** $p < .01$

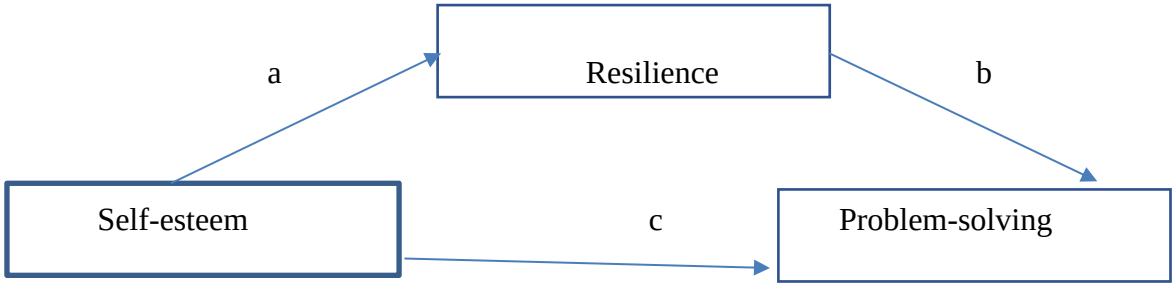
The regression output shows that independent variables self-esteem, positive attitude, handling negative emotions, high standards, control and spirituality explain 36% ($R^2 = .36$) of the variance in problem-solving skills (dependent variable) in third year university students at the Windhoek based UNAM campuses. Standardised beta values indicate that self-esteem ($\beta = .28$, $p < .01$) positive attitudes ($\beta = .16$, $p < .05$) and high standards ($\beta = .37$, $p < .01$) contribute significantly towards the variance in problem-solving skills of the students. High standards ($\beta = .37$) makes the strongest unique contribution to explaining problem-solving skills (dependent variable), when the variance explained by all other variables in the model is controlled for. Handling negative emotions, control and spirituality do not contribute significantly to the variance in problem-solving skills.

4.8 Resilience as Mediator of the Relationship between Self-Esteem and Problem-Solving Skills

Mediation analysis was also used to investigate the hypothesis that resilience mediates the relationship between self-esteem and problem-solving skills as depicted in Figure 1 below. This analysis is not a formal objective of this study, but was still performed as a matter of interest.

Figure 1

A visual representation of how resilience mediates the relationship between self-esteem and problem-solving skills



In this analysis, the independent variable is self-esteem. The dependent variable is problem-solving skills, whilst the mediator variable is resilience. According to the Process macro via bootstrapping method of Hayes and Rockwood (2017), a mediator has mediational effect when the indirect effect of self-esteem (independent variable) on problem-solving skills (dependent variable) (path c) via resilience (mediator variable) is significant and when the bias corrected 95% CI around the indirect effect from 500 bootstrap re-samples excludes zero. The results show that there is a significant total effect between self-esteem and problem-solving skills ($B = 1.62$, $p < .001$) (path c), whilst path a (i.e., self-esteem on resilience) ($B = 1.35$, $p < .001$), and path b (i.e., resilience on problem-solving skills) ($B = 0.63$, $p < .001$) were both significant. Finally, when resilience entered the relationship between self-esteem and problem-solving skills, the direct effect ($B = 0.76$, $p < .001$) was significant. In addition, the bias corrected 95% CI is 0.14, and CI95% = 0.58 to 1.15 which excludes zero. Hence, resilience is regarded as a mediator for self-esteem on problem-solving skills.

4.9 Conclusion

This chapter reported on the analysis of the data that was collected for this quantitative study. The data analysis was done by means of the SPSS (Statistical Package for Social Sciences) (IBM Corp, 2022) software. Descriptive statistics were used to obtain the characteristics of the participants from the biographical information. Cronbach's alpha was used to determine the reliability of the three scales (RSES, PSI and CD-RISC) and the sub-scales. The means obtained for the different constructs were used to determine the levels of self-esteem, resilience, and problem-solving skills of the participants. Pearson's correlation coefficient was applied to determine whether any relationship exists between self-esteem, resilience, and problem-solving skills and the sub-scales and if so, what the strength and direction of such correlations were.

Independent samples t-tests were employed to determine differences in the levels of self-esteem, problem-solving skills and resilience between male and female students. A multiple regression analysis was conducted to determine whether self-esteem or resilience contributed the most to the variance in problem-solving skills of third year students at the Windhoek-based campuses of the University of Namibia to establish whether self-esteem or resilience was the strongest predictor of level of problem-solving skills.

Although not part of the formal objectives of this study, the researcher conducted some more analyses out of curiosity. Thus, a standard multiple regression analysis was performed to test the impact of independent variables, which consist of the sub-scales of the CD-RISC Scale (positive attitude, handling negative emotions, high standards, control, and spirituality) on problem-solving skills. Another standard multiple

regression analysis was also performed to test the impact of independent variables, which consist of the sub-scales of the CD-RISC Scale and self-esteem on problem-solving skills. Then, a mediation analysis was applied to determine if the effect of self-esteem on problem-solving skills goes via the mediator resilience.

This chapter presented the findings of the study, using tables to illustrate the data. It presented the descriptive statistics and the results of the statistical analysis obtained in the current research study. Chapter 5 will contain a discussion of the findings, as it interprets the results from this study.

CHAPTER FIVE: DISCUSSION

5.1. Introduction

The aim of this chapter is to provide a detailed interpretation and discussion of the findings, based on the results collected in this study. The chapter will start with a discussion on the characteristics of the sample as well as the reliability of the scales (RSES, PSI and CD-RISC) based on Namibian data. Next, the overall levels of self-esteem, problem-solving skills and resilience of university students will be discussed, followed by an elaboration on the correlations found between these three constructs. In addition, this chapter also contains a discussion on the gender differences in the levels for self-esteem, problem-solving skills, and resilience. Moreover, there will be a discussion on which of the independent variables (self-esteem or resilience) had the largest impact on the variance in problem-solving skills.

5.2. Discussion

The aim of this study was to explore the overall levels of self-esteem, resilience, and problem-solving skills of third year university students at the Windhoek based UNAM campuses in Namibia. The study also aimed to determine the possible relationships between these three constructs, as well as the strength and direction of these relationships (if any). In addition, it also sought to discover possible differences between male and female levels of self-esteem, resilience, and problem-solving skills for this population. Finally, this study intended to determine whether self-esteem or resilience had the largest impact and predictor value on problem-solving skills. This study utilised a deductive approach. The probability sampling technique simple random sampling was used to sample participants for this study. The study used four

research instruments to collect data, namely the Rosenberg Self-Esteem Scale (RSES), the Connor–Davidson Resilience Scale (CD-RISC), and the Problem Solving Inventory (PSI), in addition to a socio-demographic questionnaire. These tools were administered to 326 participants within the Windhoek area. The results from this study provide an indication of the overall levels of self-esteem, resilience and problem-solving skills that exists within a sample of third year university students studying at UNAM, in Windhoek. Overall, the level of self-esteem that was measured from the responses to the RSES questionnaire was 75%. The level of problem-solving skills that was measured from the responses to the PSI was 68%. The average level of resilience that was measured from the responses to the CD-RISC was 69%. Findings revealed above moderate levels of self-esteem and resilience, as well as subordinate levels of problem-solving. These findings are consistent with previous studies that have also considered self-esteem (Mustafa et al., 2015) and resilience (Pretorius & Padmanabhanunni, 2022); however, the current population seemed to perceive their problem-solving abilities more negatively than other populations (Heppner et al., 2002; Kourmousi, et al., 2016).

Furthermore, statistically significant positive relationships were found between self-esteem, resilience, and problem-solving skills. Based on Pearson's correlation, it was also found that self-esteem, resilience, and problem-solving skills interact positively. These results corroborate findings of previous research studies, indicating that these three constructs positively affect one another (Coşkun et al., 2014; Ertekin Pinar et al., 2018; Nasiri et al., 2015; Özdemir & Adıgüzel, 2021; Özkan, 2018).

Independent samples t-tests revealed no statistically significant differences between female and male students' levels of self-esteem, problem-solving skills, and resiliency levels. This is also consistent with other studies comparing the levels of self-esteem (Westaway et al., 2015), resilience (Van der Merwe, et al., 2020) and problem-solving abilities (Heppner et al., 2002) among males and females. Finally, standardised beta values indicate that self-esteem and resilience contribute significantly towards the variance in problem-solving skills of third year university students at the Windhoek based UNAM campuses. The regression analysis revealed that self-esteem and resilience explain 33% of the variance in problem-solving skills. Research by Ertekin Pinar et al. (2018) compatibly suggests that as psychological resilience and self-esteem levels increase, problem-solving skills increase. Total resilience was found to make the strongest unique contribution to explaining total problem-solving skills (dependent variable), when the variance explained by all other variables in the model is controlled for.

5.2.1 Characteristics of the sample

Participants who took part in this quantitative study were asked to provide their biographical information, specifically their age, gender, campus, faculty, and home region. The age ranges of the participants indicated that the majority of the participants were between the ages of 18 and 24. This is due to the fact that most individuals attend university after completing high school and is especially representative of Namibian youth. Of the 326 participants surveyed for the study, 27% were male and 73% were female, indicating that less than a third of the population for this study was male. Therefore, the current research findings are not equally representative of the male and female Namibian population. Since research produces knowledge that often forms the

foundation for social development, policy formulation and the development of services and products, it is crucial that this knowledge benefits all individuals, of any gender, in society. The majority of the participants were studying at Windhoek Main Campus, however the sample sizes (and number of participants that took part in this study) from each of the four campuses were representative of the third year student population at the Windhoek-based UNAM campuses. Most of the participants came from the Khomas region, followed by the Omusati region and then the Oshana region. The minority of the participants came from the Hardap region. Although this study was exemplary of the third year students studying at Windhoek-based UNAM campuses, it does not necessarily mean that these results apply to all third year UNAM students from campuses in other regions.

5.2.2 Reliability of the research instruments based on Namibian data

A reliability analysis was carried out with the Rosenberg Self-Esteem Scale comprising of 10 items, the Problem-Solving Inventory comprising of 32 items (along with three filler items), and the Connor-Davidson Resilience Scale comprising of 25 items. The Cronbach alpha coefficient for all three scales were greater than .8, which fulfils Nunnally's (1978) standards of reliability of .70 minimum for research purposes (Lance et al., 2006). The reliability of all the scales in this study can be regarded as satisfactory ($\alpha > 0.80$) (Pretorius & Padmanabhanunni, 2022).

The Cronbach alpha coefficient for the RSES in this study ($\alpha = .82$) is lower than found by Westaway et al. (2015) with a South-African population. Westaway et al. (2015) found coefficients ranged between .93 and .97 amongst five South African groups. However, the reliability of the RSES found in this study is higher than those found by

Schmitt and Allik (2005) in other African countries (for example, .72 in Botswana and .75 in Zimbabwe).

The reliability coefficient for the PSI in this study (α= .84) is similar to the alpha coefficient of .84 reported by Pretorius (1996) in a sample of 423 undergraduate students at the University of the Western Cape, South Africa (cited in Heppner, et al., 2002). However, the Cronbach's alpha for this study is slightly lower than the .89 reported by Heppner, et al. (2002) in their study on the generalizability of the PSI to South African Black college students. They found that the PSI and the three factors have acceptable levels of internal consistency in the South African sample (Heppner, et al., 2002). Moreover, the Cronbach's alpha coefficient for the PSI scale in this population was also lower than the 0.91 reported by Kourmousi et al. (2016) in a nationwide sample of Greek educators.

The Cronbach alpha coefficient for the CD-RISC25 in this study (α= .86), is lower than the reliability found in the South-African study by Pretorius and Padmanabhanunni (2022), which reported the reliability (Cronbach's alpha) of the CD-RISC 10 α =.95. In addition to the differences in resilience between different contexts, this variance might also be explained by the use of different versions of the CD-RISC (CD-RISC25 and the CD-RISC10). However, Van der Merwe et al. (2020) found Cronbach's alpha values of .92 and .91 for pre-clinical and clinical groups of South African university students using the CD-RISC25. The reliability of the CD-RISC25 in this study was also lower than that found by Jørgensen and Seedat (2008), who reported an alpha coefficient of .93 for a diverse group of South African

adolescents, in addition to findings by Marx et al. (2017), who reported a reliability coefficient of .94 in a study among South African adults.

Although the reliability coefficients for the RSES, PSI and CD-RISC were lower than that reported by other researchers within the global and African contexts, the reliability of these instruments in the Namibian context are nonetheless satisfactory. The Cronbach alpha coefficients in the Namibian context for these instruments are well above the standard (α=.7) required by Nunnally (1978) for research purposes (Lance et al., 2006).

5.2.3 Self-esteem, resilience and problem-solving skills

An above average level of self-esteem ($\bar{x}$=30 or 75%) was found with third year UNAM students (Objective 1). These findings are higher than the results reported by Mustafa et al. (2015), who found moderate levels of self-esteem in Albanian and Kosovar students, also using the RSES. The findings of the current study are in line with research findings by Schmitt and Allik (2005), who found that five groups of Black, White, Indian and Mixed Race adult residents of Greater Pretoria scored above the theoretical midpoint of the RSES. Moreover, respondents from Botswana and Zimbabwe also scored above average on the RSES, representing generally positive evaluations of self-esteem (Schmitt & Allik, 2005).

Similarly, Tovar-Murray (2004) found a mean score of 34.22 on the RSES, suggesting above moderate levels of self-esteem among a sample of 196 African Americans, with the average age being 35 years. Moreover, the research by Tovar-Murray (2004) recognised significant positive relationships between social class and self-esteem and

education and self-esteem, indicating that individuals who report higher social class and more education tend to report higher self-esteem. This means that higher social standings and higher educational ranks are linked with greater levels of self-worth. With the aforesaid in mind, one probable explanation for the positive levels of self-esteem in the present study could be that for people in general, personal, and professional accomplishments, such as educational achievement, obtaining employment, higher education, as well as attaining financial resources, and benefiting from the achievements and success of one's efforts positively relates to a good sense of self-esteem. This is especially appropriate in a civilisation in which prosperity is often required for optimal well-being, since prosperity allows more opportunity for individuals to experience positive emotions and in turn helps to build their durable personal resources, extending from intellectual and physical resources to social and psychological resources. The current population of this study have all had the accomplishment of advancing to their third year of tertiary studies. This may well provide them with the confidence that they are close to graduation, as well as employment or post-graduate studies. On the contrary, self-esteem might be much lower for Namibians who do not have the option of attending university, or even completing school. According to the Education Policy and Data Centre (2018), in Namibia, 19% of 15-24 year olds have not completed primary education in Namibia.

An above average level of resilience ($\overline{x}$=69.73 or 69%) was found with third year university students at the Windhoek based UNAM campuses in Namibia (Objective 1). This finding is slightly higher, yet not significantly different from the mean resilience scores (67.25%) reported by Pretorius and Padmanabhanunni, (2022), using the CD-RISC10. It thus seems that despite challenging circumstances in developing countries, Namibian youth seems to have the ability to bounce back from difficulties.

This is significant as persons with higher resilience tend to successfully balance negative emotions with positive ones. Better resilience then leads to a greater well-being and ultimately creates an amassing effect of positive thoughts (Cohn et al. 2009).

In their research on South African undergraduate university students, Van der Merwe et al. (2020), observed mean scores of 84.6% (for pre-clinical group) and 90.5% (clinical group) on the CD-RISC25. The findings from the current study indicate lower levels of resilience in the student population as compared to findings from the study by Van der Merwe et al. (2020). According to Connor and Davidson (2003) the CD-RISC consists of five dimensions. On positive acceptance of change and secure relationships (dimension 1) the participants' average score was 70%. The second dimension, tolerance of negative affect, trust in one's instincts, and perceived benefits of stress, was scored at 57%. Moreover, the participants' personal competence, high standards, and tenacity (dimension 3) was reported at a level of 71%. Their level of perceived control (dimension 4) was 66%. As for the dimension of spirituality, the average score was noted to be 75%. By comparing these means, it seems that students scored best on dimension 5, spirituality, and scored the lowest on dimension 2, tolerance of negative affect, trust in one's instincts, and perceived benefits of stress. This may well be explained considering that spirituality in Namibia is an important part of the culture and for many, spirituality impacts the way in which they perceive their reality and the world. Spirituality is an important strength for individuals to manage their life challenges and it is also a source of meaning, comfort, and strength during trying times. Koenig (2012) accordingly states that there is a complex relationship between spirituality and well-being, as it facilitates coping and fills adverse events with a sense of meaning and purpose. Spirituality is related to better

mental well-being, specifically reduced hopelessness, lower stress and angst, improved health, and more positive emotions (Koenig, 2012). Additionally, the Cronbach alpha of the subscale spirituality of the CD RISC scale, based on Namibian data was .497, indicating vulnerable reliability. It could thus simply be that the sub-scale did not measure spirituality reliably.

This sample's average level of problem-solving skills was also above moderate ($\bar{x}$=131 or 68%) (Objective 1). Lower total scores on the PSI represent superior levels of problem-solving skills. The value obtained in the present study is higher than the means obtained in Heppner et al. (2002) for the problem-solving skills total scores (M 81.20), indicating that third year students at the Windhoek-based UNAM campuses had lower levels of problem-solving skills than South African Black college students. Pretorius (1996) as cited in Heppner (2002) reported a problem-solving skills mean of 83.10 in undergraduate students at the University of the Western Cape, South Africa, which shows superior levels of problem-solving as compared to the current population. In the Kourmousi et al. (2016) study, with a national sample of Greek educators, a lower mean value was found for total problem-solving skills score (78.5). Since lower total PSI scores indicate better levels of problem-solving skills, the findings indicate better levels of problem-solving in the Greek sample. According to Heppner and Petersen (1982) the PSI consists of three different factors. Third year UNAM students, studying in Windhoek, had average scores of 49 (74%) for problem-solving confidence (factor 1: PSC), 65 (67%) for approach-avoidance style (factor 2: AAS), and 16 (53%) for personal control (factor 3: PC). Since lower scored on the three PSI factors indicate better levels of each of these factors, the findings (Factor 1: $\bar{x}$=25.50 ; Factor 2: $\bar{x}$=39.50 ; Factor 3: $\bar{x}$=16.50) by Heppner et al. (2002) show that

the problem-solving confidence and approach-avoidance style reported by the participants in this current sample is significantly subordinate to and the personal control is equivalent to that of the South African sample in Heppner et al. (2002). Kourmousi, et al., (2016) reported mean values of 25.4 for Problem Solving; 38.5 for Approach-Avoidance Style; and 14.6 for Personal Control. By comparing these means, it seems that the Greek sample reported having better scores on all three factors than the current study's population. This may be attributed to differences amongst developed and developing countries. Since Greece is a developed country, it has greater overall socio-economic status, academic background, parental education, and family income as compared to developing countries such as Namibia with its longstanding history of poverty. This may well be explained by the Broaden-and-Build theory, which suggests that negative emotions restrict a person's transitory intellectual and behavioural inventory, causing them to choose and act impulsively (Kardaş & Yalçin, 2021). Negative emotions prompt restricted and instant behaviours. The challenging circumstances Namibians face may lead to the experience of negative emotions, which prevents these individuals from accessing more alternatives on ways to respond to circumstances and challenges.

A standard multiple regression analysis was also performed to test the impact of independent variables (self-esteem, positive attitude, handling negative emotions, high standards, control and spirituality) on problem-solving skills. The regression output indicates that these variables explain 36% of the variance in problem-solving skills in third year UNAM students in Windhoek. Moreover, it was found that self-esteem, high standards and positive attitudes contribute significantly towards the variance in problem-solving skills of the students. This is likely because high self-esteem and

constructive thinking lead to positive action and solution- focused behaviour, including goal setting, problem-solving, assertiveness, taking informed risks. Those who perceive themselves as successful in problem-solving are more determined, consistent, and motivated to solve problems. Such individuals perceive problems as an inevitable part of life, and rather challenge themselves to effectively overcome difficulties.

Similarly, a study by Hamarta (2009) showed that when people have a primarily positive problem orientation, their self-esteem and life satisfaction are also positively correlated with effective problem-solving. Individuals who have high self-esteem trust themselves to take risks to achieve desired outcomes despite the possibility of failure. Such people then become more ambitious (Hamarta, 2009). Moreover, those who view themselves and their problems in an optimistic way and hold themselves to high standards are more likely to successfully approach and overcome obstacles. In the current study, high standards (sub-scale of the CD RISC scale) were recognized to make the strongest unique contribution to explaining problem-solving skills, when the variance explained by all other variables in the model is controlled for. Lastly, it was found that handling negative emotions, control and spirituality do not contribute significantly to the variance in problem-solving skills. This may likely be because successful problem-solving contribute more towards feelings of control than the converse. Furthermore, from an evolutionary standpoint, to be vigilant persons need to experience some negative thoughts and feelings or else they may become complacent. This propensity of the human mind to be more receptive to negative thoughts and emotions, buttresses the need to manage problems when they arise. Although spirituality often serves as a buffer against life's challenges as well as a

source of meaning in difficult times, it likely adds more indirectly to problem-solving via factors such as a positive attitude and motivation, rather than directly contributing to more effectively solving problems. Accordingly, Bal and Or (2023) found that confidence, self-control, and avoidance variables together explained approximately 20% of the total variance in routine problem-solving achievement. In addition, confidence, self-control, and avoidance together were found to explain approximately 12% of the total variance in non-routine problem-solving achievement. Nevertheless, the regression coefficients indicated that, among the predictor variables, only confidence was significant and foretelling of the achievement of solving capricious problems.

5.2.4 Self-esteem and problem-solving skills

A significant moderate positive relationship was found between self-esteem and problem-solving skills for third year UNAM student in Windhoek (Objective 2). This result indicated that the lower the score on self-esteem obtained by a participant, the lower their scores on problem-solving skills, and the higher the score on self-esteem obtained by a participant, the higher their scores on problem-solving skills. This finding suggests that the better an individual's levels of self-esteem, the better their problem-solving skills will be and vice versa. This is in line with research findings by Kourmousi et al. (2016), who found significant correlations between problem-solving skills and self-esteem, indicating that higher levels of self-esteem are associated with better problem-solving ability.

Regression analysis also indicates that self-esteem exerts a noteworthy effect on problem-solving skills (Objective 4). According to Özkan (2018) successful problem

solvers, those who are self-confident and not afraid to confront difficulties, were reported to be considerably healthier than ineffective problem solvers (individuals who are less self-confident). Reciprocally, a study by Nasiri et al. (2015) found that an intervention consisting of problem-solving training led to an increase in the self-esteem scores of participants, while the control group showed no increase in self-esteem score. These findings indicate that problem-solving training can produce a positive change in the overall self-esteem (Nasiri et al., 2015).

5.2.5 Resilience and self-esteem

A significant strong positive relationship was discovered between self-esteem and resilience for third year UNAM student in Windhoek (Objective 2). This finding suggests that the higher an individual's levels of resilience, the better their self-esteem will be and vice versa. Liu et al. (2021) found that self-esteem and resilience interact positively and are both important indicators of positive mental health. Their findings suggested that self-esteem and resilience promoted each other and suggest that practitioners can improve client self-esteem by enhancing resilience (Liu et al., 2021). Results from a correlation analysis by Özdemir and Adıgüzel (2021) showed that there was a positive statistically significant relationship between the partakers' scores for self-esteem, resilience and social intelligence, which means that self-esteem, resilience and social intelligence levels were variables positively affecting one another.

Furthermore, in the current study, a significant strong positive correlation was observed between "high standards, tenacity and competence" and self-esteem. This means that people who set higher standards for themselves, are persistent in pursuit of their goals and feel that they are capable of successfully executing tasks will also feel

good about themselves. Accordingly, Mann et al. (2004) stated that the development of self-esteem is influenced by a widespread variety of intra-individual and societal factors. Approval and support, especially from parents and peers, and self-perceived competence in areas of significance are the central influential factors of self-esteem (Mann et al., 2004). Harter (1999) asserted that competence and social support, together offer a persuasive clarification of a person's level of self-esteem. Harter (1999) further explains that the association between self-esteem and competence in areas that a person esteems as important is much stronger than the relation in domains deemed insignificant. Both undesirable and constructive feelings of self-worth may well be the product of a perceptive, inferential process, in which individuals observe and value their own behaviors and competencies in particular domains (Mann et al., 2004). The poorer their evaluation of their competencies, particularly in comparison to the standards of significant others, the lower their self-esteem (Mann et al., 2004). However, according to McFarlin et al. (1984), persons with high self-esteem can show greater persistence at a task but in such a fashion that results are not advantageous. According to McFarlin et al. (1984), this is because the persistence is regularly counterproductive; it can be futile effort on lost causes. Moreover, Reese (n.d.) state that a person might experience pressure from their parents, family, peers, and themselves to live up to certain standards. If the individual does not perform well, his/her self-esteem may be negatively affected. Therefore, setting too high standards and persistently striving for immaculateness can be damaging to one's self-esteem. These individuals are inclined to be unreasonably self-critical and could feel inadequate when they do not meet their own unrealistic expectations. It could thus be that the environment of the individual, cultural influences, personal characteristics, and

beliefs, as well as the context in which the data is retrieved, play a role in how people experience and perceive their own abilities and value.

In addition, a significant strong positive correlation between perceived control and total self-esteem was found. In line with the findings from the current study, research by Gabriel et al. (2020) reported that the negative relation amid perceived control and emotional exhaustion was weakened among nurses who reported higher levels of self-esteem, suggesting that self-esteem may well act as a resource that buffers the negative effects of low perceived control. This correlation may be reciprocal in the sense that when an individual perceives themselves as in control of their circumstances, they will feel good about themselves and their abilities. Also, when a person feels good about themselves and their capabilities, they are more likely to feel a sense of control in life. Also, a significant strong positive correlation was found between spirituality and total self-esteem, meaning that the higher levels of spirituality of the individual, the better their self-esteem will be. Research findings by Pourfarokh (2014) similarly showed a significant association between spiritual intelligence and self-esteem among Islamic Azad University students. This suggests that self-esteem increases with increasing spiritual intelligence. Also, individuals with spiritual intelligence apply the most effective approaches when confronting stressful factors (Pourfarokh, 2014). Moreover, mediation analysis by Ngamaba and Soni (2018) found that self-esteem was one of the mechanisms through which spirituality leads to improved mental health. This could mean that for third year UNAM students in Windhoek, spirituality supports healthy self-esteem by inspiring a sense of belong to something much greater than themselves, highlighting their importance as individuals and as members of a

community. This could especially be the case in Namibia, which is characterised both as a collectivist and an individualist culture.

Regression analysis shows that at least one third of people's ability to effectively solve problems depends on their self-esteem and resilience levels (Objective 4). This means that a person's capability to successfully adapt despite challenging or threatening situations, as well as the way in which they value and perceive themselves, will significantly influence their ability to effectively solve problems. In line with this finding, research by Ertekin Pinar et al. (2018) suggests that as psychological resilience and self-esteem levels increase, problem-solving skills increase. Furthermore, as self-esteem increases, psychological resilience increases too (Ertekin Pinar et al., 2018). Standardised beta values indicate that resilience seems to have a stronger effect on problem-solving skills than self-esteem. This means that students who are resilient are more likely to have effective and efficient problem-solving skills. They will be able to understand a situation, recognise the problem and generate the best solution. To be able to successfully solve problems, it is more important to be resilient than have high self-esteem, however having both resilience and self-esteem will have the largest positive impact on effective problem-solving. Coşkun et al. (2014) also found that as students' resiliency level increases, their perception about their problem-solving skills gets better.

5.2.6 Problem-solving skills and resilience

A significant strong positive relationship was discovered between problem-solving skills and resilience for third year UNAM student in Windhoek (Objective 2). This finding suggests that the more resilience someone shows, the more effective their

problem-solving skills will be and vice versa. In a study by Coşkun et al. (2014), the relationship between resilience and problem-solving skills of students was found to be significantly positive. This outcome shows that as students' resiliency level increase, their problem-solving skills improve (Coşkun et al., 2014).

Moreover, a significant strong positive correlation was found in the current study between resilience and problem-solving confidence, while a moderate positive correlation was found between resilience, approach-avoidance style as well as personal control. This finding means that when people show higher levels of resilience, they most probably already feel more confident that they can solve any problem that comes up. According to the broaden-and-built theory of Barbara Fredrickson (2000), when people feel positive, they produce flexible and creative thinking and problem-solving processes, which mount up and build long-lasting cognitive, physical, psychological, and social resources. Hobfoll's theory of conservation of resources (COR) postulates that bodily and psychological stress reactions are based on an inborn survival response that mobilizes the person to take action to regain the lost or reduced resources. In stressful situations, human behaviour motivates responses that are marked by an attempt to limit losses and maximize gains (Hobfoll, 1989). According to the COR theory by Hobfoll (1989), persons should invest in resources to avoid the loss of and restore lost resources, and also attain new resources. By cultivating psychological resources such as resilience and self-esteem, it can serve as coping tools that help individuals to inhibit prospective losses, while also allowing them to better manage stressors that do occur.

Moderate positive correlations were also found between a person's positive attitude to change and secure relationships and total problem-solving skills. This means that students who view change in an optimistic manner and have good social support, are more likely to be successful in solving problems that may arise in life. Sturm and Bohndick (2021) found in a study with students that the students' attitudes and beliefs correlate with their problem-solving performance. These authors also state that persons' attitudes towards problem-solving are governing factors on performance and learning attainment which should not be undervalued. Furthermore, Ramazanpour et al. (2020) state that the enjoyment of social support systems, such as family and peers, naturally facilitates managing problems and that social support acts as a shield or buffer against life's challenges.

Moderate positive correlations were also found between a person's positive attitude to change and secure relationships and problem-solving confidence, as well as approach-avoidance style. This means that those who view change constructively and have fulfilling social relations, tend to feel more assured in their skills to efficiently approach and solve problems and they are also prone to approach problems in order to reach a desired outcome rather than avoid the undesired circumstances. This is likely because a positive attitude can lead to a more creative approach to problem-solving and increases the likelihood of finding a successful solution. A positive attitude can also help to increase motivation and poise when approaching a problem.

A small positive correlation was found between positive attitude to change and secure relationships on the one hand, and personal control on the other. This means that welcoming change and having good relationships may slightly enhance one's belief

about the degree to which he/ she has power over their circumstances. This may be due to Namibians having the sense that although they take a positive attitude towards change and have good social support, this does not necessarily mean that they can significantly control events and outcomes. This can be ascribed to historical, personal, and cultural factors. Still, it seems that Namibian youth have learned to trust themselves to find solutions and confront challenges, despite not always having control. In addition, moderate positive correlations can be seen amongst "handling negative emotions, trusting instincts and perceived benefits of stress" and total problem-solving, suggesting that when people are able to manage difficult feelings, listen to their intuition and recognise the possible advantages in challenging situations, they are more likely to have good problem-solving skills. Moderate positive correlations can also be seen amongst "handling negative emotions, trusting instincts and perceived benefits of stress" and problem-solving confidence, as well as approach-avoidance style. This means that when individuals are able to handle undesirable emotions, trust their intuition and recognise the benefits of trying situations, they are prone to feel more confident that they can solve arising problems and confront the problematic situation instead of avoiding it. A small positive correlation was found among "handling negative emotions, trusting instincts and perceived benefits of stress" and personal control. This may be caused by the factor of personal control on the PSI only consisting of 5 items. Significant strong positive correlations between "high standards, tenacity and competence" and total problem-solving as well as problem-solving confidence were identified. This means that those who set higher standards for themselves, are determined to reach certain outcomes, and believe in their ability to do something, will also be confident in their capacity and be able to navigate problems. Significant moderate positive correlations between "high

standards, tenacity and competence" and approach-avoidance style, in addition to personal control, were established, showing that when a person sets certain expectations for themselves, have a purpose in mind and trust in their abilities, they are more likely to take risks, assume control and attempt to solve arising problem.

Significant moderate positive correlations between "perceived control" and total problem-solving scores, problem-solving confidence, approach-avoidance style, as well as personal control were recognised. According to Thompson and Spacapan (1991), perceived control is connected to reduced physiological impact of stressors, emotional well-being, improved ability to cope with stress, enhanced performance, and a greater likelihood of making challenging behavior modifications. Perceived control thus allows people to have the perception that they have the capability, resources, and opportunities to attain desired outcomes or minimise negative outcomes through their own actions. This will in turn enhance creative problem-solving, confidence in one's problem-solving abilities, as well as taking risks and attempting so resolve any problems that may arise.

Moderate positive correlations were also found amid total problem-solving, and problem-solving confidence. This means that having assurance in one's own capacity to resolve challenges leads to improved overall problem-solving skills. Accordingly, research by Diah Ayu (2023) asserts that individuals who have confidence in their abilities to successfully handle difficulties tend to have high problem-solving abilities as well.

Finally, small positive correlations between “spirituality” and approach-avoidance style, as well as personal control, were established. This may be because spiritual practices often give individuals a sense of security which may enhance their feeling of being in control - not necessarily of the problem, but of themselves. Spirituality has a constructive influence on persons during stress or crisis by means of providing coping resources and affecting the person’s perception of the occurrence (Krok, 2008). Moreover, Krok (2008) avows that spiritual practices have been recognised as an essential shield against demanding situations which may support individuals in overcoming their hardships and distress. There exists a strong relationship amongst spirituality and coping, resultant of many individuals who are searching for spiritual support in the course of demanding life events, utilising spiritual practice as a source of guidance (Krok, 2008). According to Krok (2008), this means that people with a great level of spirituality will attempt to find solutions and employ efforts intended for solving the problem.

In the current study, it was found that psychological factors positive attitude, handling negative emotions, high standards, control and spirituality influence people’s ability to solve problems by more than a third. This has significant implications for professionals like psychologists, social workers, coaches and educators, who work with other people, as all these inner resources can be improved in human beings. Cultivating these psychological factors can enhance persons’ problem-solving skills. In other words, this may in turn help individuals navigate life’s circumstances and empower them to help themselves and improve their overall well-being. According to Ertekin Pinar et al. (2018), as psychological resilience and self-esteem levels rise, problem-solving skills increase, also as self-esteem levels improve, psychological

resilience increases too. Not only does self-esteem and resilience influence problem-solving skills, but according to Tang et al. (2020), increasing the problem-solving skills of undergraduate students may affect and increase their resilience level. Furthermore, problem-solving skills can help individuals to increase their self-worthiness, self-esteem, and self-esteem (Tang et al., 2020). Resilience and problem-solving abilities are positively associated. As a person's psychological resilience increase, their problem-solving abilities also increase. Furthermore, as self-esteem increases, psychological resilience increases as well. Problem-solving skills are regarded as an indicator of both coping and resilience. Individuals who are resilient and possess adequate coping resources are in an optimal position to confront daily stressors. And so, those who have good problem-solving abilities are likely to have high levels of coping resources.

Standardised beta values show that high standards and positive attitudes contribute significantly towards the variance in problem-solving skills of the students. This suggests that a positive approach toward problem-solving along with high expectations for quality or achievement allows the individual to discover more possibilities, producing dynamic methods for solving issues. Positive attitudes and high standards motivate individuals to think flexibly, allowing them to view a problem from various perspectives and generate diverse ideas. Ozturk and Guven (2016) accordingly state that positive beliefs and views inspire students to engage in effective problem-solving behaviour and an increased effort to solving issues. While positive beliefs increase students' success in problem-solving processes, negative beliefs on the other hand lead to avoidance of problem-solving attempts and reduced perseverance, consequently decreasing their success. High standards were found to

make the strongest unique contribution to explaining problem-solving skills (dependent variable), when the variance explained by all other variables in the model is controlled for. This makes sense as having high standards means that a person expects themselves to perform at a certain level so as to accomplish desired outcomes of high quality. This motivates individuals to approach problems in creative and resourceful manners, allowing them to display effective problem-solving skills.

Finally, handling negative emotions, control and spirituality were found to not contribute significantly to the variance in problem-solving skills. This means that a person's belief in their capacity to impact circumstances and taking responsibility for the events that they are exposed to, their ability to handle undesired feelings, along with the belief in and commitment to something bigger than oneself, will not have a significant effect on their problem-solving skills. The reason for this might be that spirituality often only serves as a buffer and coping resource, not necessarily impacting the approach to and outcomes of problem-solving processes. Moreover, managing negative emotions and supposed control does not naturally mean the presence of positive emotions, thoughts and attitudes, and actual control over external factors; hence it might not always make a momentous positive contribution to problem-solving skills.

5.2.7 Differences between male and female levels for self-esteem, problem-solving skills and resilience

No statistically significant difference was found between female and male students' levels of self-esteem (Objective 3) at the Windhoek based UNAM campuses in Namibia. Regression analyses by Westaway et al. (2015) accordingly showed that age,

gender and employment status explained less than 5% of the variance in scores of self-esteem. Other findings on gender were conflicting, with no differences between men and women on self-esteem (Sinclair et al., 2010), and with women having lower self-esteem than men do in young adulthood (Orth, et al., 2010). The findings of these researchers correspond with the research findings of the current study, exemplifying that men in this population have marginally better levels of overall self-esteem than the female participants of this study. This dissimilarity may be caused by differences in gender roles as well as the different elements men and women use to value and identify themselves.

No statistically significant difference was found between female and male students' levels of resilience (Objective 3) at the Windhoek based UNAM campuses in Namibia. Research findings by Van der Merwe et al. (2020) on gender differences in resilience similarly showed that there were no significant differences in resilience scores between male and female students. These researchers did however find that male students had slightly higher scores on resilience (Van der Merwe et al., 2020). This is in accordance with the findings from this study, showing slightly higher resilience mean scores for males than females, demonstrating higher levels of resilience in men as compared to women amongst third year UNAM students in Windhoek. These differences could be ascribed to the long-standing societal expectation of men to be tough and be able to withstand anything that comes their way. Females also tend to expect men to be stronger in character. However, the difference in resilience levels between male and female students is not significant.

No statistically significant difference was found between female and male students' levels of problem-solving skills (Objective 3) at the Windhoek based UNAM campuses in Namibia. Correspondingly, Heppner et al. (2002) found that the problem-solving total scores or any of the three factors were not significantly related to various demographic variables, including age, gender, language, relationship status and religion. None of these analyses were found to be significant (Heppner, et al., 2002). In the current study population, overall male scores on problem-solving skills were slightly lower than the average scores of females. This is in accordance with the research study by Kourmousi et al. (2016) who discovered lower values on all PSI subscales, along with the total problem-solving score, for men compared to women. The higher scores on problem-solving amongst male participants in this study could be due to masculine norms of men having to be more independent and self-reliant as compared to women.

Although not being an objective of this study, a mediation analysis was conducted, and it was found that resilience mediates the relationship between self-esteem and problem-solving skills. Resilience seems to be a mediating factor. For example, Yang et al. (2019) found with substance abuse patients in China that resilience mediated the relationship between self-esteem and self-efficacy. However, it seems that self-esteem can also act as mediator. Lee and Chae (2017) found in a study with Korean youth that self-esteem mediated the relationship between resilience and problem-solving skills.

5.3 Conclusion

This study aimed to gain an understanding of the levels of self-esteem, resilience, and problem-solving skills in the Namibian context by looking at a sample of third year

university students in Windhoek. This chapter contained a discussion of the main research findings, and interpreted the results, as well as relating it to other research findings from previous studies. Finally, in Chapter 6, the summary, conclusions, limitations, and recommendations will be discussed.

CHAPTER SIX: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter provides an overview of the study and conclusions regarding the findings regarding self-esteem, resilience, and problem-solving skills of third year University of Namibia students. It also identifies limitations of the study, as observed by the researcher. Lastly, recommendations are made regarding psychological research and resources in addition to utilising such resources to improve Namibians' overall welfare. In this final chapter of the thesis, the conclusions from the study are drawn, limitations of the study are discussed and recommendations for future work are made.

6.2 Conclusions

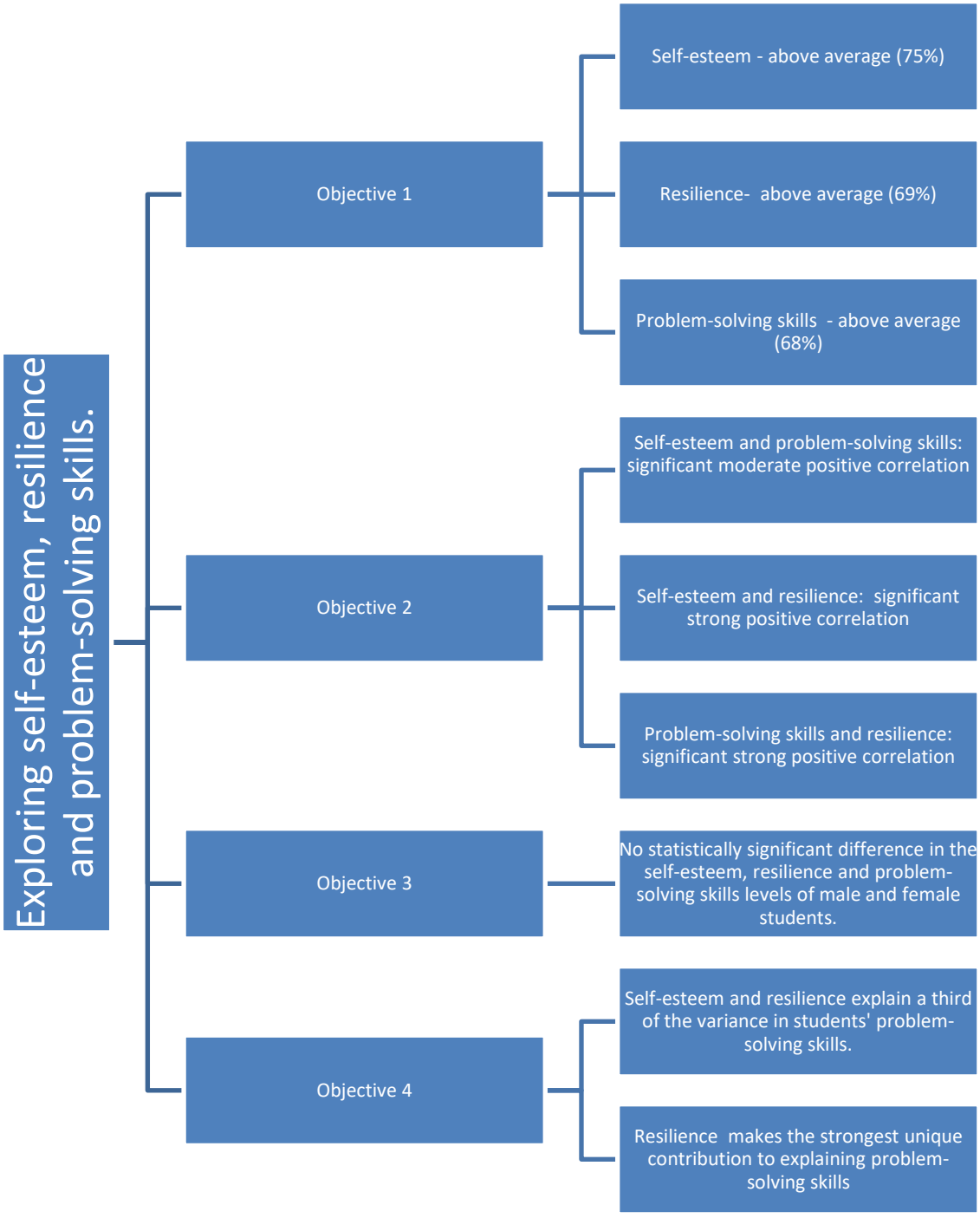
The aim of the current study was to explore the overall levels of self-esteem, problem-solving, and resilience of third year UNAM students in Windhoek. Moreover, it sought to identify the relationships between these three variables, as well as to determine whether there are any significant differences between the levels of self-esteem, resilience, and problem-solving skills between male and female students. Finally this study intended to determine whether self-esteem or resilience has the largest impact on the participants' problem-solving skills.

In this study, third year university students displayed above moderate levels of self-esteem and resilience, alongside subservient levels of problem-solving skills. Significant positive correlations were observed between self-esteem, problem-solving skills and resilience. This indicates the significant positive interactions between all three variables, meaning that they positively influence one another. Both resilience

and self-esteem were found to significantly contribute to the variance in problem-solving skills. In addition, it was found that resilience accounted for majority of the variance in problem-solving skills. Finally, no significant differences were found in the resilience, self-esteem and problem-solving levels of male and female students.

Figure 2

Summary of the main findings against the objectives of the current study



The findings of this study deliver elaborate information to the field of positive psychology in Namibia, especially the internal resources (namely self-esteem, resilience and problem-solving abilities) among Namibian youth. To conclude, this research highlighted that there is room for improvement when it comes to cultivating innate psychological resources in the Namibian population, so as to help individuals navigate life's challenges optimally and improve their well-being.

6.3 Limitations

The present study had the following limitations:

Since convenience sampling was used to select participants, the representativeness of the sample may be questioned. According to Neuman (2014), convenience sampling produces non-representative samples, therefore it is not recommended for selecting an accurate sample to represent the population. This study is also limited by the momentous difference in the number of male participants as compared to the number of female participants. There were considerably fewer male participants who participated in this study, with majority of the research population being female. Unequal representation by students from different faculties at UNAM, which might also be a significant variable to consider, also limited the study. Moreover, although the study included participants who come from different regions in Namibia, the fact that this study only focussed on individuals who are currently based in Windhoek is another limitation. It could provide useful information regarding differences in the psychological resources between different areas of Namibia, if this study were to focus more extensively on participants from different regions. Finally, the current study is limited as it only focused on university students, not including participants of different

life phases. It could benefit from broader inclusion criteria to include participants from more diverse age groups and walks of life.

6.4 Recommendations

Based on the findings of the present study, several recommendations are made. Firstly, a great deal of attention should be spent on cultivating psychological resources in individuals, especially children and youth. Resilience, problem-solving and self-esteem are attributes of positive psychology and are important indicators of positive mental health. The research findings suggest that these indicators promote each other, which is of great significance for future psychological interventions and public health interventions in the Namibian population. Authorities, practitioners, and other entities can work on creating awareness of the importance of self-esteem, resilience and problem-solving abilities, as well as helping citizens understand that these constructs are interconnected. Attention should be directed toward enhancing resilience, self-esteem and problem-solving capabilities, which in turn has a mediating effect on the welfare of individuals.

In general, there is a notable gap in research on positive psychology constructs, such as self-esteem, resilience and problem-solving skills in Namibia. Research studies should be conducted on self-esteem, resilience and problem-solving skills across all age ranges and regions of the country. Considering that awareness about these concepts, and positive psychology in general might vary between different regions and age groups.

Moreover, research on the levels of self-esteem, resilience and problem-solving skills of adolescents and first year students may well offer a valuable contribution in light of the alarming dropout rates in universities.

Finally, it is vital to investigate the variables that account for variances in individual's levels of self-esteem, resilience and problem-solving skills, especially since Namibia is known for its diversity, with citizens coming from vastly different backgrounds.

References

Ahmed, I., Qazi, T. F., & Jabeen, S. (2011). Self-efficacy: The predictor of educational performance among university students. *Information Management and Business Review, 3*(2), 57–62. https://ojs.amhinternational.com/index.php/imbr/article/view/917/917

Allen, J., & Roberts, T. (2019). *What's the problem? Student resilience in issue resolution. Emerging Initiative*. University of Newcastle. https://unistars.org/papers/STARS2019/04E.pdf

Babbie, E. R. (2010). *The practise of social research (12th ed.).*

Bal, A. P., & Or, M. B. (2023). Investigation of the relationship between problem-solving achievement and perceptions of students. *Pedagogical Research, 8*(1). https://www.pedagogicalresearch.com/download/investigation-of-the-relationship-between-problem-solving-achievement-and-perceptions-of-students-12745.pdf

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological, Review 84*(2), 191–215. https://educational-innovation.sydney.edu.au/news/pdfs/Bandura%201977.pdf

Bless, C., Higson-Smith, C., Sithole, S., & De Villiers, A. (2013). Fundamentals of social research methods. *Fundamentals of Social Research Methods: An African Perspective (5 ed., pp. 192–195).*

Çam, S., & Alkal, A. (2020). An investigation of interpersonal problem solving in university students in terms of personality traits, resilience and hope. *European Journal of Educational Sciences, 7*(1), 15–31. https://files.eric.ed.gov/fulltext/EJ1250457.pdf

Chemers, M. M., Watson, C. B., & May, S. T. (2000). Dispositional affect and leadership effectiveness: A comparison of self-esteem, optimism, and efficacy. *Personality and Social Psychology Bulletin, 26*(3), 267–277. https://journals.sagepub.com/doi/10.1177/0146167200265001

Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion, 9*(3), 361–368. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3126102/pdf/nihms-222302.pdf

Connor, K., & Davidson, J. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18,* 76–82. https://www.researchgate.net/publication/10576109_Development_of_a_new_resilience_scale_The_Connor-Davidson_Resilience_Scale_CD-RISC

Conway, A. M., Tugade, M. M., Catalino, L. I., & Frederickson, B. L. (2012). The broaden-and-build theory of positive emotions: Form, function, and mechanisms. In S. David, I. Boniwell, & A. C. Ayers (Eds.), *Oxford handbook of happiness* (pp. 17–34).

Cook, L., Cook, B. G., Landrum, T. L., & Tankersley, M. (2008). Examining the role of group experimental research in establishing evidenced-based practices. *Intervention in School and Clinic, 44*(2), 76–82.

Coolican, H. (2013). *Research Methods and Statistics in Psychology (5th ed.).* Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9780203769669/research-methods-statistics-psychology-hugh-coolican-hugh-coolican

Coşkun, Y., Garipağaoğlu, B. Ç., & Tosun, Ü. (2014). Analysis of the relationship between the resiliency level and problem-solving skills of university students. *Procedia - Social and Behavioral Sciences. 114*(10).

Creswell, J. W. (2012). *Educational research design: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.).* Pearson Education. http://repository.unmas.ac.id/medias/journal/EBK-00121.pdf

Creswell, J. W., & Creswell J. D. (2018). *Research design: Qualitative, quantitative and mixed methods approaches (5th ed).* https://spada.uns.ac.id/pluginfile.php/510378/mod_resource/content/1/creswell.pdf

De Almeida Santos, Z., & Soares, A. B. (2018). Social skills, coping, resilience and problem-solving in psychology university students. *Liberabit, 24*(2), 265–276. http://ojs3.revistaliberabit.com/index.php/Liberabit/article/view/118/119

De Vos, A. S., Strydom, H., Fouche, C. B., & Delport, C. S. L. (2011). *Research at the grass roots for the social sciences and human service providers (4th ed.).*

Diah Ayu, F. F. (2023). Analysis of problem solving ability in view of self confidence in a PBL learning model based on blended learning with diagnostic assessment. *International Journal of Education and Research, 11*(2), 53–64. https://www.ijern.com/journal/2023/February-2023/05.pdf

Education Policy and Data Center. (2018). Sub-Saharan Africa Income Group: Upper middle income source for region and income groupings. World Bank, National Education Profile Update. https://www.epdc.org/sites/default/files/documents/EPDC_NEP_2018_Namibia.pdf

Ertekin Pinar, S., Yildirim, G., & Sayin, N. (2018). Investigating the psychological resilience, self-esteem and problem-solving skills of midwife candidates. *Nurse Education Today, 64*, 144–149. https://pubmed.ncbi.nlm.nih.gov/29482050/

Fredrickson, B. L. (2000). Cultivating positive emotions to optimize health and well-being. *Prevention and Treatment, 3*(1). https://www.wisebrain.org/papers/CultPosEmot.pdf

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and build theory of positive emotions. *American Psychologist, 56*, 218–226. https://www.prospectivepsych.org/sites/default/files/pictures/Frederickson_Broaden-and-build-2001.pdf

Gabriel, A. S., Erickson, R. J., Diefendorff, J. M., & Krantz, D. (2020). When does feeling in control benefit well-being? The boundary conditions of identity commitment and self-esteem. *Journal of Vocational Behavior, 119*(3). https://www.sciencedirect.com/science/article/abs/pii/S0001879120300403?via%3Dihub

Garmsari, G., & Safara, M. (2017). The moderating effect of the economic situation on relationship between problem-solving skills and mental health in working women and housewives. *Higher Education Studies, 7*(3). http://doi.org/10.5539/hes.v7n3p1

Gay, L. R., & Diehl, P. L. (1992). Research methods for business and management. In R. Hill (Ed.), *What Sample Size is 'Enough' in Internet Survey Research?* Interpersonal Computing and Technology: An electronic Journal for the 21st Century. https://cadcommunity.pbworks.com/f/what%20sample%20size.pdf

Golshiri, P., Mostofi, A., & Rouzbahani, S. (2023) The effect of problem-solving and assertiveness training on self-esteem and mental health of female adolescents: A randomized clinical trial. *BMC Psychology, 11*(106). https://bmcpsychology.biomedcentral.com/articles/10.1186/s40359-023-01154-x#citeas

Gonzo, W. (2001). The psychological repercussions of unemployment: A study of Windhoek's "street unemployed". University Of Namibia.

https://repository.unam.edu.na/bitstream/handle/11070/1615/Gonzo_2001.pdf?sequence=1&isAllowed=y

Graber, R., Pichon, F., & Carabine, E. (2015). *Psychological resilience. State of knowledge and future research agendas.* Overseas Development Institue. https://odi.org/en/publications/psychological-resilience-state-of-knowledge-and-future-research-agendas/

Greenacre, L., Tung, N. M., & Chapman, T. (2014). Self confidence, and the ability to influence. *Academy of Marketing Studies Journal*, *18*(2), 169–180. https://www.researchgate.net/publication/286318041_Self_confidence_and_the_ability_to_influence

Grix, J. (2002). Introducing students to the generic terminology of social research. *Politics, 22*(3), 175–186. https://onlinelibrary.wiley.com/doi/epdf/10.1111/1467-9256.00173

Ha, E. (2020). How to convert a mean score to a percentage. Sciencing (December, 2020). Retrieved from: https://sciencing.com/convert-mean-score-percentage-5993737.html

Hako, A. N., & Shikongo, P. T. (2019). Factors hindering students from completion of studies within the prescribed duration: A case study of the public University in Namibia. *Journal of the International Society for Teacher Education, 23*(1). https://files.eric.ed.gov/fulltext/EJ1237575.pdf

Hamarta, E. (2009). A prediction of self-esteem and life satisfaction by social problem solving. *Social Behavior and Personality: An International Journal. 37*(1), 73–82. https://www.researchgate.net/publication/233502855_A_prediction_of_self-esteem_and_life_satisfaction_by_social_problem_solving

Harter, S. (1999). The construction of the self. A developmental perspective. https://psycnet.apa.org/record/1999-02441-000

Heppner, P. P., & Petersen, C. (1982). The development and implications of a personal problem-solving inventory. *Journal of Counseling Psychology, 29,* 66–75. https://www.researchgate.net/publication/232490851_The_Development_and_Implications_of_a_Personal_Problem-Solving_Inventory

Heppner, P. P., Pretorius, T. B., Wei, M., Lee, D., & Wang, Y. (2002). Examining the generalizability of problem-solving appraisal in Black South Africans. *Journal of Counseling Psychology, 49*, 484–98. https://www.researchgate.net/publication/232556734_Examining_the_generalizability_of_problem-solving_appraisal_in_Black_South_Africans

Herrman, H., Stewart, D., Diaz-Granados, N., Berger, E., Jackson, B., & Yuen, T. (2011). What is resilience? *Canadian Journal of Psychiatry*, *56*(5), 258–265.

Hinton, P. R., McMurray, I., & Brownlow, C. (2014). *SPSS explained (2nd ed.).* https://www.academia.edu/34038589/SPSS_Explained_2nd_Edition

Hobfoll, S. (1989). Conservation of resources: A new attempt at conceptualizing stress. *The American psychologist, 44*, 513–524. https://www.researchgate.net/publication/20507127_Conservation_of_Resources_A_New_Attempt_at_Conceptualizing_Stress

IBM Corp. (2022). IBM SPSS Statistics for Windows, Version 29.0. IBM Corp.

Ibrahim, M. (2013). How (and why) Africa should solve its own problems. https://www.devex.com/news/how-and-why-africa-should-solve-its-own-problems-81488

Ilhan, A., & Bardakcı, U. S. (2020). Analysis on the self-esteem of university students according to physical activity participation. *African Educational Research Journal, 8*(1), 111-114. https://files.eric.ed.gov/fulltext/EJ1263346.pdf

James, S.L., & Amato, P.R. (2013). Self-Esteem and the reproduction of social class. Social Science Quarterly, *94*(4). 933-955. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4283772/

Jellenz, M., Bobek, V., & Horvat, T. (2020). Impact of education on sustainable economic development in emerging markets - The case of Namibia's tertiary education system and its economy. *Sustainability*, *12*(21), 8814. https://www.researchgate.net/publication/346382312_Impact_of_Education_on_Sustainable_Economic_Development_in_Emerging_Markets-The_Case_of_Namibia%27s_Tertiary_Education_System_and_its_Economy

Jørgensen, I., & Seedat, S. (2008). Factor structure of the Connor-Davidson Resilience Scale in South African adolescents. *International Journal for Adolescent Medical Health, 20*(1), 23–32. https://www.degruyter.com/document/doi/10.1515/IJAMH.2008.20.1.23/html

Juliano, M. C. C., & Yunes, M. A. M. (2014). Reflections on the social support network as a mechanism for the protection and promotion of resilience. *Ambiente & Sociedade, 17*(3), 135–154. https://www.scielo.br/j/asoc/a/BxDVLkfcGQLGXVwnHp63HMH/?format=pdf&lang=en

Kalomo, E. N., Shamrova, D., Jun, J. S., Lightfoot, E., Mgori, N. K., & Kalb, A. (2021). Psychosocial factors affecting self-esteem among youth living with human immunodeficiency virus (HIV) in Namibia. *African Journal of Social Work, 11*(5),

273–282. https://www.researchgate.net/publication/365712225_Psychosocial_factors_affecting_self-esteem_among_youth_living_with_HIV_in_Namibia

Kapur, R. (2020). Problem-solving skills are essential skills in providing solutions to personal and professional problems. https://www.researchgate.net/publication/343690626_Problem_Solving_Skills_Essential_Skills_in_Providing_Solutions_to_Personal_and_Professional_Problems

Karaırmak, O. (2009). Establishing the psychometric qualities of the Connor-Davidson Resilience Scale (CD-RISC) using exploratory and confirmatory factor analysis in a trauma survivor sample. *Psychiatry Research, 179*(3), 350–356. https://www.researchgate.net/publication/44621734_Establishing_the_psychometric_qualities_of_the_Connor-Davidson_Resilience_Scale_CD-RISC_using_exploratory_and_confirmatory_factor_analysis_in_a_trauma_survivor_sample

Kardaş, F., & Yalçin, I. (2021). The Broaden-and-Built theory of gratitude: Testing a model of well-being and resilience on Turkish college students. *Participatory Educational Research, 8*(1), 141–159. https://www.researchgate.net/publication/344405550_The_Broaden-and-Built_Theory_of_Gratitude_Testing_a_Model_of_Well-_Being_and_Resilience_on_Turkish_College_Students

Koenig, H. G. (2012). Religion, spirituality, and health: The research and clinical implications. *International Scholarly Research Network (ISRN) Psychiatry,* Article ID: 278730.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3671693/pdf/ISRN.PSYCHIATRY2012-278730.pdf

Kourmousi, N., Xythali, V., Theologitou, M., & Koutras, V. (2016). Validity and reliability of the problem solving inventory (PSI) in a nationwide sample of Greek educators. *Social Sciences. 5*(2), 25. https://www.mdpi.com/2076-0760/5/2/25

Krok, D. (2008). The role of spirituality in coping: Examining the relationships between spiritual dimensions and coping styles. *Mental Health, Religion & Culture, 11*(7), 643–653. https://www.scirp.org/reference/referencespapers?referenceid=1597074

Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The source of four commonly reported cutoff criteria. *Organizational Research Methods, 9*(2), 202–220. https://www.researchgate.net/publication/230786782_The_Sources_of_Four_Commonly_Reported_Cutoff_Criteria_What_Did_They_Really_Say

Lee, H., & Chae, K. (2017). The influence of resilience of the North Korean adolescents on their social problem-solving ability: Focused on mediating effect of self-esteem. *Journal of the Korea Academia-Industrial Cooperation Society, 18*(9), 395–402.

Lewis, L. (January, 2020). Confidence at work: Why employers should nurture this soft skill. https://www.indeed.com/lead/confidence-at-work

Liu, Q., Jiang, M., Li, S., & Yang, Y. (2021). Social support, resilience, and self-esteem protect against common mental health problems in early adolescence: A nonrecursive analysis from a two-year longitudinal study. *Medicine, 100*(4). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7850671/pdf/medi-100-e24334.pdf

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel*

Psychology, *60*(2), 541–572. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1010&context=leadershipfacpub

Luthar, S., Sawyer, J., & Brown, P. (2012). Conceptual issues in studies of resilience: Past, present, and future research. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3480733/pdf/nihms410748.pdf

Malik, M. A., Anwar, M., & Ullah, S. (2017). Social adjustments and self-efficacy of university students. *Humanities and Social Sciences*, *24*(2). https://www.researchgate.net/publication/325069925_Social_adjustments_and_Self-efficacy_of_University_Students

Manhas, C. (2014). Self-esteem and quality of life of people living with HIV/AIDS. *Journal of Health Psychology*, *19*(11):1471-1479. https://pubmed.ncbi.nlm.nih.gov/23864076/#:~:text=A%20significant%20positive%20correlation%20between,moderator%20of%20quality%20of%20life.

Mann, M., Hosman, C. M. H., Schaalma, H. P., & De Vries, N. K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health Education Research*, *19*(4), 357–372. https://academic.oup.com/her/article/19/4/357/560320

Mannarini, S. (2010). Assessing the Rosenberg Self-Esteem Scale dimensionality and items functioning in relation to self-efficacy and attachment styles. *Testing, Psychometrics, Methodology in Applied Psychology*, *17*(4), 229–242. https://www.tpmap.org/wp-content/uploads/2014/11/17.4.4.pdf

Markway, B., & Ampel, C. (2018). *The self-esteem workbook. A guide to overcoming self-doubt and improving self-esteem.* https://icrrd.com/public/media/01-11-2020-204705The%20Self%20Confidence%20Workbook.pdf

Marx, M., Young, S.Y., Harvey, J., Rosenstein, D., & Seedat, S. (2017). An examination of differences in psychological resilience between social anxiety disorder and posttraumatic stress disorder in the context of early childhood trauma. *Frontiers in Psychology, 8*(1), 2058. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2017.02058/full

Matiti, C. C. (2020). *The role of self-efficacy in psycho-social adjustment of fourth year students at the University of Namibia.* https://repository.unam.edu.na/bitstream/handle/11070/3210/Matiti_2020.pdf?sequence=1&isAllowed=y

McFarlin, D.B., Baumeister, R.F., & Blaskovich, J. (1984). On knowing when to quit: Task failure, self-esteem, advice and nonproductive persistence. *Journal of Personality, 52*(2), 138–55. https://onlinelibrary.wiley.com/doi/10.1111/j.1467-6494.1984.tb00349.x

Mcnulty, K., Livneh, H., & Livneh, C. (2015). Psychosocial adjustment to college among lower division students with disabilities. *Academic Research Journal, 3*, 129–142. https://www.academicresearchjournals.org/IJARER/PDF/2015/July/McNulty%20et%20al.pdf

Molinero, R. G., Zayas, A., González, P. R., & Guil, R. (2018). Optimism and resilience among university students. *International Journal of Developmental and Educational Psychology, 1*(1), 147–154. https://www.redalyc.org/jatsRepo/3498/349855553017/html/index.html

Murphey, D.A., Barry, M.C., & Vaughn, B. (2013). Positive mental health: Resilience. https://cms.childtrends.org/wp-content/uploads/2013/03/Child_Trends-2013_11_01_AHH_Resilience.pdfb

Mustafa, S., Melonashi, E., Shkëmbi, F., Besimi, K., & Fanaj, N. (2015). Anxiety and self-esteem among university students: Comparison between Albania and Kosovo. *Procedia - Social and Behavioral Sciences, 205,* 189–194. https://www.researchgate.net/publication/283295302_Anxiety_and_Self-esteem_among_University_Students_Comparison_between_Albania_and_Kosovo

Mwinga, M. S. (2012). Unemployment in Namibia: Measurement problems, causes & policies- Working Paper. https://firstcapitalnam.com/wp-content/uploads/2022/10/First-Capital-Namibia-Unemployment-Report-May-2012.pdf

Namibia, N. P. (2021). "The Global Goals" NAMIBIA'S VISION 2030 Namibia's second voluntary national review report on the implementation of the sustainable development goals towards Agenda 2030. https://sustainabledevelopment.un.org/content/documents/279462021_VNR_Report_Namibia.pdf

Namibia Statistics Agency. (2018). Unemployment rate. Retrieved from: https://nsa.nsa.org.na/ on 24/02/2024.

Nasiri, S., Kordi, M., & Gharavi, M. M. (2015). A comparative study of the effects of problem-solving skills training and relaxation on the score of self-esteem in women with postpartum depression. *Iranian Journal of Nursing and Midwifery Research, 20*(1), 105–112. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4325401/pdf/IJNMR-20-105.pdf

National Research Council. (1994). *Self-esteem and performance. Learning, remembering, believing: Enhancing human performance.* https://nap.nationalacademies.org/read/2303/chapter/13

Neuman, W. L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*. *Pearson Education Limited (7th ed.).* https://letrunghieutvu.yolasite.com/resources/w-lawrence-neuman-social-research-methods_-qualitative-and-quantitative-approaches-pearson-education-limited-2013.pdf

Ngamaba, K. H., & Soni, D. (2018). Are happiness and life satisfaction different across religious groups? Exploring determinants of happiness and life satisfaction. *Journal of Religion and Health, 57*(6), 2118–2139. https://pubmed.ncbi.nlm.nih.gov/28951998/

Nunnally, J. C. (1978). *Psychometric theory (2nd Edition).*

Orth, U., Trzesniewski, K. H., & Robins, R. W. (2010). Self-esteem development from young adulthood to old age: A cohort-sequential longitudinal study. *Journal of Personality and Social Psychology, 98*, 645–658. https://www.apa.org/pubs/journals/releases/psp-98-4-645.pdf

Özdemir, N., & Adıgüzel, V. (2021). The relationship between social intelligence, self-esteem and resilience in healthcare professionals and the affecting factors. *Journal of Psychiatric Nursing, 12*(1), 18–28. https://jag.journalagent.com/phd/pdfs/PHD-96658-RESEARCH_ARTICLE-OZDEMIR%5BA%5D.pdf

Özkan, Y. (2018). Anxiety, depression, problem solving and stress management in patients with Ankylosing Spondylitis. *Meandros Medical and Dental Journal, 1*9, 57–63.

https://www.researchgate.net/publication/324564484_Anxiety_Depression_Problem_Solving_and_Stress_Management_in_Patients_with_Ankylosing_Spondylitis

Özreçberoğlu, N., & Çağanağa, Ç. K. (2018). Making it count: Strategies for improving problem-solving skills in mathematics for students and teachers' classroom management. *Eurasia Journal of Mathematics, Science and Technology Education, 14*(4), 1253–1261. https://www.ejmste.com/download/making-it-count-strategies-for-improving-problem-solving-skills-in-mathematics-for-students-and-5341.pdf

Ozturk, T., & Guven, B. K. (2016). Evaluating students' beliefs in the problem solving process: A case study. *Eurasia Journal of Mathematics, Science & Technology Education, 12*(2), 411–429. https://www.ejmste.com/download/making-it-count-strategies-for-improving-problem-solving-skills-in-mathematics-for-students-and-5341.pdf

Perkins, K. E. (2018). T*he integrated model of self-esteem: Defining and operationalizing self-esteem in organizational settings.* https://repository.fit.edu/cgi/viewcontent.cgi?article=1333&context=etd

Pidgeon, A. M., Rowe, N. F., Stapleton, P., Magyar, H. B., & Lo, B. C. (2014). Examining characteristics of resilience among university students: An international study. *Open Journal of Social Sciences, 2*(11), 14. https://www.researchgate.net/publication/268502909_Examining_characteristics_of_resilience_among_university_students_An_international_study

Pourfarokh, M. (2014). Study of the relationship between spiritual intelligence and self-esteem with ways of stress coping styles in university students. International Conference on Social Sciences and Humanities, 1008–1017. https://www.ocerints.org/Socioint14_e-publication/papers/234.pdf

Pretorius, T. B., & Padmanabhanunni, A. (2022). Validation of the Connor-Davidson Resilience Scale-10 in South Africa: Item response theory and classical test theory. *Psychology Research and Behavior Management, 15*, 1235–1245. https://www.researchgate.net/publication/360621645_Validation_of_the_Connor-Davidson_Resilience_Scale-10_in_South_Africa_Item_Response_Theory_and_Classical_Test_Theory

Ramazanpour, A., Javdan, M., Zarei, I., & Haj, A. K. (2020). Relationship between social support, problem-solving skills, and resilience with hardiness among first-grade high school students in Sari. *Avicenna Journal of Neuro Psycho Physiology, 7*(2), 85–92. https://ajnpp.umsha.ac.ir/article-1-315-en.pdf

Reese, S. (n.d.). Factors affecting self-esteem. http://www.conferencemgt.com/presseinforms/SEINFORMS%202008%20-%20Proceedings/proc/p080527003.pdf

Riopel, L. (2022, February 5). Resilience skills, factors and strategies of the resilient person. Retrieved March 14, 2022, from PositivePsychology.com: https://positivepsychology.com/resilience-skills/

Rodriques, I., & Pieters, W. R. (2019). Assessing the predictors of satisfaction with life of employees in Windhoek, Namibia. *South African Journal of Human Resource Management, 17*(0), 1145. https://repository.unam.edu.na/bitstream/handle/11070/2790/rodriques_assessing_2019.pdf?sequence=1&isAllowed=y

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton University Press.

Salkind, N. J. (1997). Organizational research: Determining appropriate sample size in survey research: Exploring research. (3rd.). In J. E. Bartlett, J. W. Kotrlik, & C. C.

Higgins. (2001). *Information Technology, Learning, and Performance Journal*, *19*(1), 43–50. https://www.opalco.com/wp-content/uploads/2014/10/Reading-Sample-Size1.pdf

Şar, A. H., Avcu, R., & Işıklar, A. (2010). Analyzing undergraduate students' self-esteem levels in terms of some variables. *Procedia - Social and Behavioral Sciences*, *5*, 1205–1209. https://www.sciencedirect.com/science/article/pii/S1877042810016368

Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology*, *89*(4), 623–642.

Sinclair, S. J., Blais, M. A., Gansler, D. A., Sandberg, E., Bistis, K., & LoCicero, A. (2010). Psychometric properties of the Rosenberg Self-Esteem Scale: Overall and across demographic groups living within the United States. *Evaluation & the Health Professions*, *33*, 56–80.

Sturm, N., & Bohndick, C. (2021). The influence of attitudes and beliefs on the problem-solving performance. *Frontiers in Education*, *6*. https://www.researchgate.net/publication/349458666_The_Influence_of_Attitudes_and_Beliefs_on_the_Problem-Solving_Performance

Tang, S. C., Long, X. H., & Yap, L. M. (2020). Relationship between happiness and problem-solving skills toward resilience among undergraduate students. http://eprints.utar.edu.my/3806/1/fyp_PY_2020_YLM_-_1602569.pdf

The Programme for International Student Assessment. (2003). Problem solving for tomorrow's world. First measures of cross-curricular competencies from PISA 2003. https://www.oecd-ilibrary.org/docserver/9789264006430-

en.pdf?expires=1707987425&id=id&accname=guest&checksum=F32DAB399FEABE3BED2AE3249B9D636F

Thompson, S. C., & Spacapan, S. (1991). Perceptions of control in vulnerable populations. *Journal of Social Issues, 47*(4), 1–21. https://www.researchgate.net/publication/229526401_Perceptions_of_Control_in_Vulnerable_Populations

Tovar-Murray, D. (2004). *Exploring the relationship between race-related stress, identity and well-being among African Americans.* Dissertations. Western Michigan University. https://scholarworks.wmich.edu/dissertations/1311/

Uedufy. (October 4, 2023). *How to run mediation analysis in SPSS.* https://uedufy.com/how-to-run-mediation-analysis-in-spss/

UNAM. (2023). *Statistics at the University of Namibia.* University of Namibia Press.

Van der Merwe, L. J., Botha, A., & Joubert, G. (2020). Resilience and coping strategies of undergraduate medical students at the University of the Free State. *South African Journal of Psychiatry, 26*(0), 1471. https://sajp.org.za/index.php/sajp/article/view/1471

Walton, A. (2011, June 10). Forbes. Retrieved March 13, 2022, from https://www.forbes.com/sites/alicegwalton/2011/06/10/where-does-self-esteem-come-from/?sh=f5fb64a3f933

Wells, C. (July 2016). The harsh reality of tracing an IP address. Published on Linkedin. https://www.linkedin.com/pulse/harsh-reality-tracing-ip-address-chris-wells?_l=en_US

Westaway, M. S., Jordaan, E. R., & Tsai, J. (2015). Investigating the psychometric properties of the Rosenberg self-esteem scale for South African residents of greater Pretoria. *Evaluation & the Health Professions, 38*(2), 181–199.

Wu, G., Feder, A., Cohen, H., Kim, J., Calderon, S., Charney, D., & Mathé, A. (2013). Understanding resilience. *Frontiers in Behavioral Neuroscience, 7*(10). https://www.researchgate.net/publication/235669385_Understanding_Resilience

Yang, C., Zhou, Y., Cao, Q., Xia, M., & An, J. (2019). The relationship between self-control and self-efficacy among patients with substance use disorders: Resilience and self-esteem as mediators. *Frontiers in Psychiatry, 10,* Article 388. https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2019.00388/full

Yu, X., & Zhang, J. (2007). Factor analysis and psychometric evaluation of the Connor Davidson Resilience Scale (CD-RISC) with Chinese people. *Social Behavior and Personality, 35*(1), 19–30. https://www.sbp-journal.com/index.php/sbp/article/view/1554

ANNEXURE A: ETHICAL CLEARANCE

UNAM
UNIVERSITY OF NAMIBIA

ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: SAH02/23 **Date: 17/03/2023**

This Ethical Clearance Certificate is issued by the University of Namibia Decentralized Ethics Committee (DEC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the School of Allied Health Sciences Decentralized Ethics Committee.

Title of Project: Exploring the relationship between self-perceived confidence, resilience and problem-solving skills of third year students at the University of Namibia
Principal Researcher: Hilet Nolte
Student Number: 201601638

Centre for Research Services

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee
4. The ethics committee retains the right to:

i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.

Dr T.W. Shumba (Chairperson, Ethics Committee)

Prof. Davis Mumbengegwi (Head, Multidisciplinary Research)

ANNEXURE B: INFORMED CONSENT FORM

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

EXPLORING THE RELATIONSHIP BETWEEN SELF-ESTEEM, RESILIENCE AND PROBLEM-SOLVING SKILLS OF THIRD YEAR STUDENTS AT THE UNIVERSITY OF NAMIBIA

PRINCIPAL INVESTIGATOR: Hilet Nolte

CO-INVESTIGATOR: Dr. Manfred Janik

CONTACT DETAILS: noltehilet1@gmail.com

You are being invited to take part in a research study. Please take some time to read the information presented here, which will explain the details of this study. Please ask the principal investigator and the co-researcher any questions about any part of this study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point up to the stage of data collection, even if you do agree to take part.

This study has been approved by the Department of Psychology and Social Work Ethics Committee at the University of Namibia and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki and Namibian National Research Ethics Guidelines.

1. **What is this research study all about?**
   a. The main aim of this research is to explore self-esteem, resilience and problem-solving skills of third year students at the Windhoek-based campuses (Main Campus, Hage Geingob Campus, Khomasdal Campus, and Neudam Campus) of the University of Namibia (UNAM).

2. **Why have you been invited to participate?**
   a. The information collected from you will be used for academic purposes in order to explore the relationship between self-esteem, resilience and problem-solving skills of third year students at the University of Namibia, Windhoek based campuses. As you are currently a registered third year student at a Windhoek based campus of UNAM, you are invited to participate in this study.

3. **What will your responsibilities be?**
   a. You are requested to answer the demographic questionnaire, fill in the *Rosenberg self-esteem scale* (RSES), *Connor-Davidson Resilience Scale (CD-RISC), as well as the Problem Solving Inventory* (PSI).

4. **Will you benefit from taking part in this research?**
   a. You will be adding to the knowledge about student self-esteem, resilience and problem solving skills, as well as contributing to the understanding of how these three constructs interrelate. This may benefit current and future citizens of Namibia in that they learn to know more about internal resources that they can mobilise to tackle the problems of life. Exploring the relationship between self-esteem, resilience and problem-solving skills can provide a pathway towards easier mitigating of difficult life circumstances.

5. **Are there any risks involved in your taking part in this research?**
   a. By completing the questionnaires, you might realize that or wonder whether you have difficulty with general health problems or any of the three areas (self-esteem, resilience or problem-solving skills). If that is the case, please feel free to contact any of the following numbers:

UNAM student counselors:

Ms. Markishuana Nependa- (+264 61 2064 319) Email: mnependa@unam.na

Ms. Nyomonee Tjihukununa- (+264 61 206 4977) Email: ntjihukununa@unam.na

OR

LifeLine/ChildLine Namibia (+264 61 226 889)

6. **Will you be paid to take part in this study and are there any costs involved?**
   a. You are not required to pay anything by participating in this study, nor will you receive payment for your involvement in this study.

7. **Is there anything else that you should know or do?**
   a. You can contact Hilet Nolte at the e-mail address noltehilet1@gmail.com if you have any further queries or concerns. You can also contact Dr. M. Janik at telephone number +264 (0) 61 206 3144 and e-mail address mjanik@unam.na if you have any further queries or encounter any problems.
   b. The CD-RISC (instrument) is not freely available to use without permission from the relevant right holders. By signing this form, you also agree to not copy or use any of the instrument without the required permission from the relevant parties.
   c. Kindly keep a copy of this information and consent form for your own records.

8. **Declaration by participant**

By signing below, I ……..……. agree to take part in a research study entitled "Exploring the relationship between self-esteem, resilience and problem-solving skills of third year students at the University of Namibia".

I declare that:

   a. I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
   b. I have had a chance to ask questions and all my questions have been adequately answered.
   c. I understand that taking part in this study is **voluntary** and I have not been pressured to take part.
   d. I may choose to leave the study at any time up until data collection and will not be penalised or prejudiced in any way.
   e. I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (place) .....…..…….. on (date) ……...…….. 2022.

..... **.....**

Signature of participant Signature of witness

9. Declaration by investigator

I, ……*Hilet Nolte*……, declare that:

- I distributed all the information in this document to ……..
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above.

..... 14/03/2023

Signature of Principal Investigator Date

ANNEXURE C: QUESTIONNAIRES

Biographical, Self-esteem, Resilience and Problem-solving skills Questionnaires

Section A: Biographical Questionnaire

Indicate which of the statements apply to you and tick (X) the box provided:

1. What is your age?

	1	Under 18 years old
	2	18-24 years old
	3	24-34 years old
	4	35-44 years old
	5	Above 45 years old

2. What is your gender?

	1	Male
	2	Female

3. Select the Campus which you study at.

	1	Windhoek Main Campus
	2	Windhoek Khomasdal Campus
	3	Windhoek Hage Geingob Campus
	4	Neudamm Campus

4. Select your current year of studies:

	1	First year
	2	Second year
	3	Third year
	4	Other (Specify):

5. Provide your faculty of study on the line provided below:

---

6. Specify which region in Namibia you come from (if not from Namibia, please specify):

Section B: Rosenberg Self-Esteem Scale (RSES) Questionnaire

Instructions: Below is a list of statements dealing with your general feelings about yourself. Please indicate with an (**X**) how strongly you agree or disagree with each statement.

Questions	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
1. On the whole, I am satisfied with myself.				
2. At times I think I am no good at all.				
3. I feel that I have a number of good qualities.				
4. I am able to do things as well as most other people.				
5. I feel I do not have much to be proud of.				
6. I certainly feel useless at times.				
7. I feel that I'm a person of worth, at least on an equal plane with others.				
8. I wish I could have more respect for myself.				
9. All in all, I am inclined to feel that I am a failure.				
10. I take a positive attitude toward myself.				

Section C: Problem-Solving Inventory (PSI) Questionnaire

Directions: Read each item carefully. Using the scale shown below, please indicate with an (**X**) the number that best describes you. All items are scored on a six-point Likert scale, ranging from 1 = Strongly Agree to 6 = Strongly Disagree.

Questions	**1**	**2**	**3**	**4**	**5**	**6**
1. When a solution to a problem was unsuccessful, I do not examine why it didn't work.						
2. When I am confronted with a complex problem, I do not bother to develop a strategy to collect information so I can define exactly what the problem is.						
3. When my first efforts to solve a problem fail, I become uneasy about my ability to handle the situation.						
4. After I have solved a problem, I do not analyze what went right or what went wrong.						
5. I am usually able to think up creative and effective alternatives to solve a problem.						
6. After I have tried to solve a problem with a certain course of action, I take time and compare the actual outcome to what I thought should have happened.						

7.	When I have a problem, I think up as many possible ways to handle it as I can until I can't come up with any more ideas.						
8.	When confronted with a problem, I consistently examine my feelings to find out what is going on in a problem situation						
9.	I have little faith in my capacity to solve new and complex problems.						
10.	I have the ability to solve most problems even though initially no solution is immediately apparent.						
11.	Many problems I face are too complex for me to solve.						
12.	I make decisions and I am happy with them later.						
13.	When confronted with a problem, I tend to do the first thing that I can think of to solve it.						
14.	Sometimes I do not stop and take time to deal with my problems, but just kind of muddle ahead.						
15.	When deciding on an idea or possible solution to a problem, I do not take time to consider the chances of each alternative being successful.						

16.	When confronted with a problem, I stop and think about it before deciding on a next step.						
17.	I generally go with the first good idea that comes to my mind.						
18.	When making a decision, I weigh the consequences of each alternative and compare them against each other.						
19.	When I make plans to solve a problem, I am almost certain that I can make them work.						
20.	I try to predict the overall result of carrying out a particular course of action.						
21.	When I try to think up possible solutions to a problem, I do not come up with very many alternatives.						
22.	I usually use a set approach to solving different problems.						
23.	Given enough time and effort, I believe I can solve most problems that confront me.						
24.	When faced with a novel situation, I have confidence that I can handle problems that may arise.						
25.	Even though I work on a problem, sometimes I feel like I am groping or wandering, and am not getting down to the real issue.						
26.	I make snap judgments and later regret them.						
27.	I trust my ability to solve new and difficult problems.						

28. I have a systematic method for comparing alternatives and making decisions.						
29. When thinking of ways to handle a problem, I seldom combine ideas from various alternatives to arrive at a workable solution.						
30. When confronted with a problem, I do not usually examine what sort of external things my environment may be contributing to my problem.						
31. When I am confused by a problem, one of the first things I do is survey the situation and consider all the relevant pieces of information.						
32. Sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problems.						
33. After making a decision, the outcome I expected usually matches the actual outcome.						
34. When confronted with a problem, I am unsure of whether I can handle the situation.						
35. When I become aware of a problem, one of the first things I do is to try to find out exactly what the problem is.						

Section D: The Connor-Davidson Resilience Scale (CD-RISC) Questionnaire

Please read the following statements. To the right of each you will find 5 numbers, ranging from "0" (Not true at all) on the left to "4" (True nearly all the time) on the right. Indicate with an (**X**) the number which best indicates your feelings about that statement.

Possible responses range from:

0 – Not true at all

1 – Rarely true

2 – Sometimes true

3 – Often true

4 – True nearly all the time

Questions	**0**	**1**	**2**	**3**	**4**
1. I am able to adapt when changes occur.					
2. I have at least one close and secure relationship that helps me when I am stressed.					
3. When there are no clear solutions to my problems, sometimes fate or God can help.					
4. I can deal with whatever comes my way.					
5. Past successes give me confidence in dealing with new challenges and difficulties.					
6. I try to see the humorous side of things when I am faced with problems.					
7. Having to cope with stress can make me stronger.					

8.	I tend to bounce back after illness, injury or other hardships.					
9.	Good or bad, I believe most things happen for a reason.					
10.	I make my best effort, no matter what the outcome may be.					
11.	I believe I can achieve my goals, even if there are obstacles.					
12.	Even when things look hopeless, I do not give up.					
13.	During times of stress or crisis, I know where to turn for help.					
14.	Under pressure, I stay focused and think clearly.					
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.					
16.	I am not easily discouraged by failure.					
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.					
18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.					
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.					
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.					

21. I have a strong sense of purpose in life.					
22. I feel in control of my life.					
23. I like challenges.					
24. I work to attain my goals no matter what roadblocks I encounter along the way.					
25. I take pride in my achievements.					