

THE RELATIONSHIP BETWEEN LIFE SATISFACTION, LEARNER
ENGAGEMENT AND ACADEMIC PERFORMANCE IN ADOLESCENTS
IN SELECTED PUBLIC SECONDARY SCHOOLS IN WINDHOEK,
NAMIBIA

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE

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ABSTRACT

High school learners are at risk of becoming disengaged and demotivated at school which could negatively affect their academic performance or even more drastically, result in them dropping out of school. The Namibian education authorities have several concerns relating to poor national results and the increasing dropout statistics of learners. In addition, Namibia's high unemployment rate has been attributed to its general low levels of education and lack of skilled and educated people. Engaged learners are self-regulated, establish their own academic goals and evaluate their achievements, successfully direct their own learning and remain engaged. Research shows that life satisfaction can play a positive role in improving engagement levels in students and learners. Empirical evidence indicates that engaged learners tend to perform better academically, have lower dropout rates, improved psychological functioning and pursue higher education. Fredrickson's broaden-and-build theory offers an explanation for this by suggesting that the experience of frequent positive emotions such as high life satisfaction and engagement can broaden cognition which leads to an accumulation of personal, physical, behavioural and social resources that improve human functioning. However, life satisfaction and engagement research involving adolescents is still limited and from the Namibian context, no similar studies were found. The aim of this research is to evaluate the levels of life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia and investigate whether these constructs influence one another in any way. A cross-sectional descriptive survey design was

used with a sample population of 540 high school learners from public schools in Windhoek. The measuring instruments that were used were the Multidimensional Students' Life Satisfaction Scale (MSLSS), the Work Engagement Scale (WES) which was adapted for the school context, a researcher-developed biographical questionnaire, a researcher-designed academic self-report and an academic self-report. Statistical analysis was conducted in terms of descriptive, correlational, t-tests, ANOVAs and multiple regression analysis. The results suggested that there are significant positive relationships between life satisfaction and learner engagement and also between learner engagement and academic performance. No significant relationship was found between gender and grade levels influencing life satisfaction, learner engagement and academic performance. The age of the learners did, however, account for the large variation seen in academic performance, with average academic performance decreasing with an increase in the learners' age. The results gathered concluded that life satisfaction is a significant predictor of learner engagement and learner engagement is a significant predictor of academic performance. There was no significant predictive relationship directly between life satisfaction and academic performance. The results from this study validate the potential benefits of developing intervention programmes directed towards increasing learners' levels of engagement with the intention of improving academic performance. Future research initiatives involving these constructs are needed as there is still a lack of information about their value specifically to the Namibian context.

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I dedicate this thesis to my husband, Stuart, and my children, Ethan and Keira.

My life revolves around you, my family. You were the driving force and motivation behind all the time I spent completing my thesis. As a wife, mother, and teacher I had many responsibilities and was keenly aware of the sacrifices you all made to enable me to achieve my dream and to fulfil all these responsibilities. I am grateful that I can now devote more time to you all and to give back to you what you have given to me.

DECLARATION

I, Laura-Anne Rainey, declare hereby that this study is a true reflection of my own research, and that this work, or part thereof has not been submitted for a degree in any other institution of higher education.

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Laura-Anne Rainey

Date

CHAPTER 1

This chapter introduces this research by focusing on the orientation, purpose and justification for the study. It also gives a summation of the background research pertaining to and motivating this study. The problem statement, research problem, research objectives and study significance are also discussed.

1.1 INTRODUCTION

This study was prompted by a perceived need to address the continuous academic underperformance and dropout rate in the Namibian school system (Shalyefu, 2012). The recent developments in Positive Psychology as applied to personal performance and development gave new perspectives towards addressing learner engagement and academic performance. Life satisfaction, one of the Positive Psychology concepts, can play a role in addressing engagement and academic achievement. In this regard, existing research indicates that life satisfaction impacts engagement (Capri, Gündüz, & Akbay, 2013) positively, whilst engagement correlates positively with academic performance (Appleton, Christenson, & Furlong, 2008). However, limited research has been done in Namibian schools in a quest to address the concept of life satisfaction as one of the possible factors which may affect engagement and academic performance of Namibian learners in school.

The global economy is demanding and requires knowledgeable employees who can generate, integrate and evaluate new information quickly, think critically and exhibit

advanced problem-solving skills (Fredricks, Blumenfeld, & Paris, 2004). It is essential that youth are committed to learning if they are to truly benefit from the schooling experience and acquire the necessary skills and knowledge to pursue tertiary education or enter the demanding workforce of today (Fredricks et al., 2004). According to the Vision 2030 (2004) national document, Namibia is striving to become a knowledge-based society characterised by “a totally integrated, unified and flexible, and high quality education and training system” (p. 30). Improving education is important for the Namibian government and as a result, education has received the largest share of the national budget since independence (Mwinga, 2011; Nunuhe, 2015). It is essential that, as a result, we always consider new approaches or initiatives with regards to education in Namibia.

This study aims at filling the void as to what variables may positively influence learner engagement and academic performance for secondary learners. This study contributes to the development of psychological advancements within the education sector for the Namibian context.

1.2 BACKGROUND AND MOTIVATION FOR THE STUDY

Learners’ level of academic performance is essential if they are to make a success of schooling and acquire the skills needed to excel in tertiary studies and the working world (Fredricks et al., 2004). If learners are to take the initiative in directing their own

learning and develop a sense of academic commitment, they need to be motivated and engaged (Shernoff, Csikszentmihalyi, Schneider & Shernoff, 2003). Motivation and work engagement are popular concepts with Positive Psychology.

Positive Psychology initiated a change in focus in psychology from the pathological towards the positive and functional (Diener, 2000; Lee Duckworth, Steen, & Seligman, 2005; Seligman & Csikszentmihalyi, 2000), which includes happiness. Happiness is operationally defined as subjective well-being (Diener, 1984; Diener, Scollon, & Lucas, 2003; Seligman & Csikszentmihalyi, 2000) and it gives an assessment of the individual's quality of life based on his/her own set of criteria (Shin & Johnson, 1978). Subjective well-being is composed of three separate components namely, positive affect, negative affect and life satisfaction (Andrews & Withey, 1976; Diener, Emmons, Larsen, & Griffin, 1985). Life satisfaction is a rational and critical process in which individuals rate their life circumstances according to personal criteria and expectations (Diener et al., 1985; Pavot & Diener, 1993). Life satisfaction is regarded as a crucial concept in Positive Psychology and one of the most effective indicators of well-being, happiness and general functioning (Suldo, Riley, & Shaffer, 2006). Life satisfaction shows a positive relationship with work engagement (Capri et al., 2013; De Cuyper, Notelaers, & De Witte, 2009; Hakanen & Schaufeli, 2012; Nilsson, Bernspang, Fisher, Gustafson, & Löfgren, 2007; Wessels, 2009; Williamson, 2011).

Engaged people are energetic, dedicated (Leiter & Bakker, 2012), enthusiastically involved in their work (Bakker & Demerouti, 2008) and they invest their energy in their work without any limits, whilst being intensively involved in it (Rothbard, 2001). Engaged individuals thus report higher levels of life satisfaction and well-being (Capri et al., 2013). It was found that learner engagement facilitates positive educational outcomes and enhances the learning experience (Appleton et al., 2008), making it a valuable construct in education. Learner engagement has received a great deal of attention recently because higher levels thereof are regarded as a possible solution for disaffection, declining motivation and decreasing academic achievement levels (Akey, 2006; Christenson, et al., 2008; Fredricks et al., 2004). Learner engagement plays a significant role in improving academic performance and limiting the rate of school dropouts (Christenson et al., 2008; Furlong & Christenson, 2008; Lippman & Rivers, 2008). Research indicates that there is a relationship between levels of learner engagement and academic achievement (Klem & Connell, 2004; Marks, 2000). Ultimately, engaged learners are more likely to benefit from the learning experience, graduate from secondary school, achieve academic success and pursue higher education (Fredricks et al., 2004; Marks, 2000).

Fredrickson's (2001) broaden-and-build theory suggests that the experience of frequent positive emotions (which involves high life satisfaction and engagement) results in the broadening of human thoughts and behaviours. This results in the subsequent expansion of cognition and accumulation of intellectual, physical and social resources which improves functioning (Fredrickson, 2004). According to this theory, positive

emotions in education expand individual perspectives, improve intrinsic motivation, increase focus on learning and encourage positive coping behaviours (Fredrickson, 1998; Lewis, Huebner, Malone, & Valois, 2011). Ultimately, positive emotions and outcomes, such as life satisfaction and engagement will promote development and facilitate positive personal, behavioural, psychological and social outcomes (Fredrickson, 1998; Lyubomirsky, King, & Diener, 2005a; Proctor, Linley, & Maltby, 2009a).

With regards to this research, according to Fredrickson's (2001) broaden-and-build theory, higher levels of life satisfaction could generate valuable cognitive resources and positive emotions. This could subsequently result in improved learner engagement because positive emotions encourage flourishing of other enduring resources (Fredrickson, 2001). Higher levels of learner engagement correlate with high academic achievement (Klem & Connell, 2004; Newmann, Wehlage, & Lamborn, 1992) and more recent studies indicate learner engagement enhances academic achievement (Esposito & Weaver, 2011; Gerber, Mans-Kemp, & Schlechter, 2013).

1.3 PURPOSE OF THE STUDY

The purpose of this study is to evaluate the levels of life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia. In addition, this study aims at establishing

how, if at all, life satisfaction, learner engagement and academic performance are related to one another. Finally, the study will determine and compare age, gender and grade differences in life satisfaction, learner engagement and academic performance of adolescents in selected public secondary schools in Windhoek.

1.4 PROBLEM STATEMENT

The Namibian education authorities have several concerns relating to overall academic performance and dropout statistics of learners in Namibia (Shalyefu, 2012). The current poor overall academic performance in Namibia could compromise the achievement of the Vision 2030 goals (Namibia Vision 2030, 2004) and obstruct the goal of becoming a knowledge-based economy.

Furthermore, adolescence is characterized by major developmental changes which may influence general health, overall functioning, induce stress and as a result can negatively influence life satisfaction (Antaramian, Huebner, & Valois, 2008; Goldbeck, Schmitz, Besier, Herschbach, & Henrich, 2007). Global research on the life satisfaction of adolescents, particularly related to the context of schooling, has been neglected (Huebner, Seligson, Valois, & Suldo, 2006; Gilman & Huebner, 2006). No research findings on life satisfaction in Namibian adolescents could be found.

Existing research indicates that too many learners are disengaged at school (Christenson et al., 2008; Newman et al., 1992; Washor & Mojkowski, 2014). It was found that by the time learners enter secondary school, 40% to 60% have become disengaged from school (Klem & Connell, 2004). Learners who are more engaged achieve better grades and have lower dropout rates (Archambault, Janosz, Fallu, & Pagani, 2009; Klem & Connell, 2004; Newmann et al., 1992; Washor & Mojkowski, 2014). No prior studies could be found on the levels of engagement in school-going adolescents in Namibia.

Dropout rates in Namibian schools are hindering initiatives to educate the broader adolescent population, with statistics confirming that 22 000 pupils dropped out of school in 2011 and 2012 (Haidula, 2016). Kangootui (2016a) reports that teenage pregnancy is the main reason why learners (girls and some involved boys) leave school prematurely. Teenage pregnancy contributes on average to 13% of the dropout statistics (Kangootui, 2016a).

Namibia's high unemployment rate has been attributed to its general low levels of education and lack of skilled and educated people (Shalyefu, 2012). The Namibian labour force survey (2013) reported that the Namibian unemployment rate was 29.6 percent in 2013 (Namibia Labour Force Survey, 2013) and statistician General John Steydler referred to our unemployment rates as "very high" (Duddy, 2013). He noted that there is a definite relationship between level of education and employment rates

(Duddy, 2013). The worrying factor about the current employment situation in Namibia, is the surplus amount of unskilled labour and tremendous shortage of qualified and educated individuals (Shalyefu, 2012). The lack of skilled labour is attributed to the high dropout rate of learners from primary and secondary school (Shalyefu, 2012).

Existing research indicates that life satisfaction and learner engagement positively influence academic performance and as a result, these variables may be valuable to the Namibian context too, having the potential to contribute to both science and practice.

Following from the above a general research question can be formulated:

What is the relationship between life satisfaction, learner engagement and academic performance in adolescents in selected public secondary schools in Windhoek, Namibia?

1.5 SIGNIFICANCE OF THE STUDY

The overall poor academic performance of learners in national examinations and the high dropout statistics in Namibia are a concern (Regional education analysis for Namibia; Shalyefu, 2012). The pervasive low levels of education and lack of skills contribute to Namibia's high unemployment rate (Shalyefu, 2012). The employment situation in Namibia is a concern because there is an excessive amount of unskilled

labour, but an incredible shortage of qualified and educated Namibians (Shalyefu, 2012). The current low educational output in Namibia could even compromise the achievement of the Vision 2030 goals (Vision, Namibia, 2004). As a result, further research is essential in order to find and promote possible ways in which to enhance learner academic performance in Namibia.

Global research shows that learners with high levels of life satisfaction and academic engagement are more likely to achieve better academic results and less likely to drop out of school (Antaramian et al., 2008; Furlong & Christenson, 2008). Also, in organisational research it was found that life satisfaction increases levels of work engagement, which in turn leads to productive work outcomes (Capri et al., 2013). There has been a tremendous focus on learning and education (Suldo, et al., 2006). The investigation is in accordance with recent attempts to improve education policies and approaches so that they include objectives to improve academic success (Lyons & Huebner, 2014).

Further research is essential in order to find and promote possible ways in which to enhance learner academic performance and reduce dropout and repetition statistics in Namibia.

In this study on Namibian adolescents, the constructs life satisfaction and academic engagement will be used in order to understand whether they can positively influence academic achievement. With such findings, constructive recommendations can be made to the Namibian Ministry of Education, Arts and Culture that could suggest using these constructs to develop alternative strategies and programmes that could improve national learner academic achievement and possibly decrease school dropout rates.

1.6 OUTLINE OF CHAPTERS TO FOLLOW

Chapter two will focus on an analysis and explanation of the theoretical framework and give a detailed exposition of key concepts and literature pertaining to adolescents, life satisfaction, engagement and academic performance. Chapter three will contain a comprehensive outline of the methodology including sampling methods, research design and the rationale and explanation of the research instruments. In chapter four the results and data analysis of the study will be presented. And lastly, chapter five will discuss the results, the limitations, recommendations and conclusions of the study.

1.7 SUMMARY OF INTRODUCTION

This chapter is an introduction of the underlying concepts and explanation of the purpose of the study. It gives an overview of the background research and justification for the study. It also discusses the problem statement, research problem and how this

study is significant. It includes a brief outline of what is covered in each of the successive chapters of this thesis.

CHAPTER 2

2 LITERATURE REVIEW

2.1 INTRODUCTION

The objective of the literature review is to identify and examine the information resources relating to adolescents, life satisfaction, engagement and academic performance, putting the research into context. In this way, the researcher identifies relevant sources, thoroughly assesses them and gives a constructive systematic account that integrates the theoretical framework and background literature into the research. This allows for a comprehensive understanding of the framework and key terms pertaining to this study so that predictions, discussions, conclusions and recommendations are founded in literature.

2.2 ADOLESCENCE

The onset of adolescence is generally considered to be between the ages of 13 and 19 (Comer, Gould, & Furnham, 2013). It describes a transitional stage in human development that occurs between childhood and adulthood characterised by specific challenges and vulnerabilities that facilitate self-discovery and independence (Antaramian et al., 2008). Adolescence is often associated with significant physical, psychological and social change (Goldbeck et al., 2007), which are sometimes associated with turmoil and discomfort. In addition, adolescents, through this process,

consolidate the capabilities, attitudes and principles needed to function as adults (Zarrett & Eccles, 2006).

Eccles and Gootman (2002) identified specific developmental challenges associated with adolescence namely, (a) redefining the parental relationship from a dependent and subordinate one to one that requires greater maturity, responsibility and independence (b) acquiring of new social and sexual roles (c) initiating intimate partnerships (d) redefining social and personal identity (e) developing future goals and initiating steps towards pursuing them and (f) acquiring the skills, knowledge and values that will allow for successful transition into adulthood.

Jordaan and Jordaan (1998) write that physiologically, the dramatic physical and hormonal changes of adolescence are accompanied by a temporary increase in the lability of the nervous system. Emotional lability refers to disturbance in the autonomic nervous system due to failure at the synapses. Stimuli from the environment are detected by receptors of sense organs and converted into electrochemical impulses. These impulses are conducted to the central nervous system via sensory neurons. Synapses between these neurons offer a degree of resistance to the impulses resulting in a slight delay in transmission. Inhibition of this level of resistance at synapses results in high lability. As a result, weak impulses which would not normally pass are let through as a result of deficient inhibition or excessive facilitation resulting in quick and powerful nervous reactions. Individuals that have high emotional lability react

faster and more intensively to stressors. Adolescents have high basic tension levels, low emotional tension thresholds and are subject to hormonal changes, all of which explain why extreme emotional reactions are common during this developmental phase (Jordaan & Jordaan, 1998).

Data suggests that adolescents may experience high stress levels, which can affect their emotional well-being and as a result they will be more prone to mental disorders, risk-taking behaviours and suicide (Goldbeck et al., 2007). Zarrett and Eccles (2006) discuss how this turmoil is consequential of the disturbance of internal psychological processes as adolescents struggle to balance the simultaneous occurrence of multiple life changes. The vulnerabilities associated with self-discovery, growing independence and identity formation during adolescence may offer significant risks to their health (Antaramian et al., 2008). Adolescent well-being, general level of functioning and the ability to deal with these imminent challenges is dependent on their emotional, physical and cognitive assets, the availability and strength of a support system and the accessibility to developmental settings to interact with these challenges (Zarrett & Eccles, 2006). As a result, there is value in understanding what resources, qualities and influences promote adolescent health and optimal functioning, thereby facilitating a productive pathway into adulthood (Zarrett & Eccles, 2006).

Despite the notion that adolescence is often characterised as a period of stress and turmoil, adolescent research has more recently changed its focus to positive

psychological phenomena in an effort to promote optimum levels of functioning, as opposed to understanding negative behaviours (Antaramian et al., 2008). The researcher has chosen to further investigate this positive approach in an attempt to better understand positive phenomena studies of adolescence. Positive Psychology suggests studying adolescence by focusing on the development of their skills, strengths and abilities in order to encourage the greater likelihood of positive outcomes (Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006). This means that understanding and treating adolescent mental health has expanded to include positive psychological concepts and measures that reflect the full range of human functioning (Gilman et al., 2008; Huebner 2004).

2.3 SUBJECTIVE WELL-BEING – A GENERAL OVERVIEW

One of the constructs measured in this study is life satisfaction and it is a component of subjective well-being (Andrews & Withey, 1976; Diener et al., 1985). More recently, psychologists have encouraged that research also focuses on the positive aspect of psychology in order to develop a rounded and comprehensive understanding of the human condition and promote qualities that enable individuals and communities to thrive (Gable & Haidt, 2005; Huebner, 2004; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park & Peterson, 2005).

Subjective well-being is an umbrella term for “happiness” in that it describes the level of well-being people experience based on a self-assessment of their lives (Diener, 1984; Diener, 2000; Diener & Ryan, 2009). Subjective well-being is a higher order construct, composed of three related lower order constructs, namely an individual’s judgements of life satisfaction, the presence of positive emotions and negative affect (Andrews & Withey, 1976; Diener, 2000; Diener & Diener, 1996; Diener et al., 1985). Subjective well-being often predicts desirable life outcomes across several domains (Cohn, et al., 2009).

Subjective well-being is the subjective experience of feelings and cognitions of the individual, but there is value in the fact that manifestations can be measured objectively by quantifying verbal and non-verbal actions, biology, behaviour, attention and memory (Diener & Ryan, 2009). The subjective well-being of an individual is an affective and cognitive self-assessment of their life at that present moment (Diener, 1984; Diener, 2000). Happiness studies ascertain that most people are happy, with 86% of the mean subjective well-being scores of 43 nations being above neutral and positive (Diener & Diener, 1996). Diener (2012) highlighted that certain predictors of subjective well-being generalize across cultures across the world, namely social support, trust, mastery personality and the fulfilment of basic needs. He also noted that often differences in subjective well-being in different countries is subject to societal circumstances and cultural perspectives.

Subjective well-being has three notable properties: It is dependent on the individual's subjective personal experiences, it includes positive measures, is not merely the absence of negative factors and it is a global assessment of all properties of a person's life (Diener, 1984). High subjective well-being is associated with many happy emotions, fewer unpleasant feelings and an overall satisfaction with life (Diener, 2000). There is discrepancy between the three subjective well-being constructs in that they moderately correlate, but also behave as separates in relationships with other variables (Lyons & Huebner, 2014). As a result, there is value in assessing and evaluating these constructs separately to obtain a complete understanding of subjective well-being in both adults and youth (Lyons & Huebner, 2014).

Increasing amounts of evidence suggest that high levels of well-being improve life considerably within four areas, namely health and longevity, work and income, social relations and societal benefits (Diener & Ryan, 2009). Subjective well-being facilitates effective functioning and it is associated with and precedes several successful outcomes and behaviours synonymous with success (Lyubomirsky et al., 2005a). Extensive empirical evidence validates that the presence of positive affect and high levels of subjective well-being have an adaptive value that offers a variety of biological and psychological benefits to the individual, namely; it increases creativity, broadens the scope of attention and interest, improves cardiovascular health, alters frontal brain symmetry, increases immune function, enhances resilience, increases longevity, provides a greater degree of happiness and lowers cortisol levels thereby reducing and regulating stress (Fredrickson & Losada, 2005).

Diener and Ryan (2009) delve into the variety of theoretical frameworks defining subjective well-being. The more prominent ones are listed below:

- a) Telic theories believe that people have an innate need to seek happiness by consciously identifying needs and goals, which once fulfilled, result in high levels of well-being. Diener, Suh and Oishi (1997) emphasize that as a result, subjective well-being depends on individual differences in values and aspirations.
- b) According to Heady, Veenhoven & Wearing (1991) top-down versus bottom-up theories have different approaches to well-being. Top-down theories maintain that an individual is predisposed to experience the world in a certain way and this in turn influences the nature of their interactions with the world. Bottom-up theories uphold that an individual's subjective well-being is a function of the positive and negative experiences.
- c) Cognitive theories outline how cognition contributes to overall well-being and that high subjective well-being is a result of directing one's attention to positive stimuli, thinking positively and having a positive memory bias (Diener & Biswas-Diener; 2008; Diener et al., 1997). Positive interpretation of events acts as a protective buffer (Diener & Ryan, 2009).
- d) Evolutionary theories are based on the principle that positive emotions and well-being best equip humans to survive, being motivators in driving adaptive behaviour (Veenhoven, 2009). How do we assess how happy we are? Tenets, Fredrickson's (1998) "broaden-and-build theory" is a positive evolutionary

theoretical framework that is central to this study. It is described below, in section 2.7 in more detail.

- e) Diener and Lucas (1999) explain that temperament and personality are moderately related to the individual's capability for achieving well-being. For instance, extensive studies show that extraversion is more likely to determine positive affect whilst neuroticism may tend to predict negative affect (Diener&Ryan, 2009).
- f) Relative standard theories believe that well-being is a result of comparing the actual situation with preconceived standards, such as goals and ideals and past experiences (Diener, Diener & Diener; 1995; Diener & Ryan, 2009).

Diener and Ryan (2009) mention the demographic variables related to subjective well-being. Those pertaining to this study include age, gender, education and intelligence. Looking at past research, Diener and Ryan (2009) note that there seems to be no difference between gender and average subjective well-being levels. They report a weak positive correlation between the level of education an individual obtains and his/her well-being. There seems to be no link between IQ tests and subjective well-being, but there has been consistent validation of a possible link between emotional intelligence and high levels of well-being (Furnham & Petrides, 2003). International studies show that there is no consistent relationship between age and subjective well-being, and specifically that old age does not reduce happiness (Diener & Ryan, 2009; Diener & Suh 1997; Shmotkin, 1990).

According to Diener and Ryan (2009) the exact nature of the relationship between subjective well-being and these above-mentioned variables is still not clear. Individual, societal and international initiatives have been taken in researching subjective well-being levels, but Diener and Ryan (2009) emphasize the need for future research initiatives specifically distinguishing between causal versus correlational variables and the importance of ultimately improving subjective well-being around the world. There is also a need for investigating the viability of subjective well-being interventions and improving the success rate of these therapies (Diener and Ryan, 2009, Diener, Lucas & Oishi, 2002).

Higher levels of youth subjective well-being are associated with promoting optimal mental health and reducing the effects of negative experiences on psychological, emotional and behavioural development (Park, 2004). There is significance in research that actively investigates and promotes happiness and subjective well-being in adults and the youth (Diener & Ryan, 2009). According to Savahl et al. (2015), there is an increased focus on acquiring knowledge and information about child and adolescent well-being and current literature emphasizes the importance of subjective perceptions of well-being in developing effective measures. Perspectives on adolescent well-being that include positive aspects of human life such as subjective well-being and life satisfaction have received extensive attention recently (Antaramian et al., 2008; Park, 2004; Proctor, Linley, & Maltby, 2009b; Huebner, Valois, Paxton & Drane, 2005; Huebner, Suldo & Valois, 2005), but there is a need for generating more research and initiatives in this direction (Huebner, Drane & Valois, 2000a).

2.4 LIFE SATISFACTION

Life satisfaction is the subjective, cognitive and conscious judgement of an individual's overall quality of life based on his or her own standards (Pavot & Diener, 1993). It is the rational aspect of subjective well-being and it can behave as an indicator, predictor, mediator and moderator of positive development (Park, 2004). Life satisfaction is a crucial indicator of subjective well-being and research implies that measures of life satisfaction can be used to indicate levels of happiness (Proctor et al., 2009a). Previous research suggests the value of life satisfaction in attaining optimal mental health and as a factor in many life outcomes (Proctor et al., 2009a). Life satisfaction measures allow for reports to give a range of life satisfaction levels, above or below a neutral point. This allows for evaluation and differentiation between the different levels of life satisfaction. (Lewis et al., 2011) Life satisfaction levels are relatively stable over time, but sensitive to change (Gilman et al., 2008).

Cross-sectional, longitudinal and experimental research with adults regarding their overall life satisfaction indicates that higher levels of life satisfaction are associated with greater success in personal, behavioural, psychological and social functioning (Lyubomirsky et al., 2005a). Life satisfaction is regarded as playing a significant role in determining the general well-being of the youth as it behaves as a buffer for conditions negatively affecting mental health (Proctor et al., 2009a). Life satisfaction also plays an important role in adolescent psychosocial functioning (Suldo & Huebner, 2006) and is a relevant factor in adolescent adaptation (Goldbeck, et al., 2007; Lewis

et al., 2011). Positive evaluations of life satisfaction help filter and alleviate the negative effects of stressful life events and in turn reduce the development of psychological and behavioural problems among children and adolescents (Park, 2004; Proctor et al., 2009a).

Previous research indicates the significance of life satisfaction in explaining and understanding adolescents' psychological well-being (Huebner et al., 2006). International research indicates that average life satisfaction levels of individuals usually decrease with the onset and progression of adolescence (Proctor et al., 2009a). Higher levels of youth subjective well-being and life satisfaction are associated with promoting optimal mental, social and physical health, good adaptation and reducing the effects of negative experiences on psychological, emotional and behavioural development (Park, 2004). Adolescents with higher levels of life satisfaction are less likely to develop negative externalizing behaviours after stressful experiences (Suldo & Huebner, 2004). There is a relationship between low life satisfaction levels with children and adolescents and problems with psychological, social and behavioural functioning (Park, 2004). Valois, Zullig, Huebner, and Drane (2004) found a significant relationship between poor mental and physical health, suicide ideation, previous suicidal tendencies and low life satisfaction levels in adolescents between the ages of 13 and 18. This evidence that low levels of life satisfaction in adolescence usually exist with a rise in suicidal thoughts and increasing incidence of depression validates the use of life satisfaction as a valuable construct in not only accessing adolescent well-being, but predicting mental health outcomes (Goldbeck et al., 2007).

Happiness research concluded that the majority of adults around the world have positive levels of life satisfaction (Diener & Diener, 1996). International studies imply that similarly, children and adolescents generally have positive life satisfaction levels (Huebner et al. 2000a; Park & Huebner 2005; Proctor et al., 2009a). Huebner et al. (2000a) assessed the levels of overall life satisfaction of 5545 public school learners across the five domains, namely, family, friends, school, living environment and self. Results showed that most adolescents had positive overall and domain-specific levels of life satisfaction. The school domain had on average the lowest life satisfaction levels. Gilman et al. (2008) found mean scores revealing positive life satisfaction ratings of adolescents in all four nations when assessing two individualistic (Ireland and USA) and two collectivistic (China and South Korea) countries. Proctor et al. (2009a) highlight research findings across the world indicating that most children, adolescents and adults report positive, satisfied levels of life satisfaction and as a result it is predicted that this too will be the case with the life satisfaction levels of this group of Namibian adolescents.

Involved and supportive parents, physical and mental health, interest and engagement in challenging activities, positive life events, higher socioeconomic status, interactions with significant others and valuable relationships with parents and peers improve adolescent life satisfaction (Huebner, 2004; Lewis et al., 2011; Park, 2004; Proctor et al., 2009a). Research implies that the demographic variables of age, gender and race contribute very modestly to predicting adolescent life satisfaction (Diener & Ryan, 2009; Huebner et al., 2000a; Proctor et al., 2009a). As a result, predictions for this

research did not expect significant relationships between gender, age and grade levels with life satisfaction scores.

Personality and temperament have genetic derivations which can predispose individual subjective well-being and life satisfaction levels because they influence feelings, life evaluations and emotions (Diener and Ryan, 2009; Richard & Diener 2009). Proctor et al. (2009a) emphasized that these heritable characteristics can have a significant effect on life satisfaction due to their steady long-term presence and perpetual influence. These researchers also identified personality traits in adolescents that positively correlated with life satisfaction, namely extraversion, social self-efficacy, perceptions of their ability to be competent in social situations, higher emotional stability and a positive self-esteem.

Formal education offers an important setting for adolescents' psychological, social, emotional and behavioural development (Eccles, 2004). Adolescents are exposed to a variety of stressors (Antaramian et al., 2008; Eccles, 1999) and this places additional strain on their mental health and can in turn influence their life satisfaction negatively (Antaramian et al., 2008). In terms of the context of schooling, higher levels of life satisfaction have been associated with increased levels of school engagement, an improved relationship with parents, higher academic aspirations, fewer behavioural problems, valuable social relations and positive perceptions of the learners themselves (Lyons & Huebner, 2014).

2.5 ACADEMIC ENGAGEMENT

Kahn (1990) conducted a qualitative study of employee engagement with the aim of conceptualising the construct, understanding the psychological conditions associated with it and identifying its precursors. The principle of this study was that people invest themselves in work on varying physical, emotional and cognitive levels. Schaufeli, Salanova, González-Romá, & Bakker (2002b) hypothesised that engagement had a three-factor structure composed of vigour, dedication, and absorption. Vigour refers to high levels of energy, effort and resilience, dedication is the sense of significance, pride and inspiration one obtains from one's work and absorption is the extent to which one is happily and entirely immersed in work to the extent of having trouble detaching from it (Rothmann & Rothmann, 2010). Based on these evaluations by Kahn (1990) and Schaufeli et al. (2002b), employee work engagement is comprised of three dimensions. The physical engagement component is equivalent to showing vigour and energy in a task, the cognitive aspect is being alert, absorbed and involved in one's work and emotional engagement is the level of dedication and commitment to work (Schaufeli et al., 2002b). The educational process according to the psychological perspective can be related to aspects of the working framework due to the fact that obligations and expectations are also imposed on the learners within a specified time frame (Schaufeli & Taris, 2005). As a result, work engagement structures and scales are applied to learners in research where work refers to all the mandatory school responsibilities the learner has to fulfil (Capri et al., 2013)

Engagement refers to the degree that a learner is invested in school by means of his/her thoughts, feelings, actions and behaviour (Appleton et al., 2008; Furlong &

Christenson, 2008). Learner academic engagement is defined as the level of inherent interest and commitment a learner directs towards the learning process through active participation, focus and psychological connections within the schooling process (Christenson et al., 2008; Newmann et al., 1992). In contrast, disengagement involves a disconnection from school and learning, passivity, boredom, absenteeism and defending themselves physically, cognitively or emotionally (Kahn, 1990; Marks, 2000).

Academic engagement, similarly to work engagement is conceptualised as a multidimensional construct composed of similar physical, emotional and cognitive dimensions (Fredricks et al., 2004; Jimerson, Campos, & Greif, 2003; Lewis et al., 2011). Physical (or behavioural) engagement is depicted by the level of physical involvement and indicators include absenteeism, homework completion and attendance of extracurricular activities (Fredericks et al., 2004). Emotional engagement involves the feelings and emotions associated with school, teachers and academics (Lewis et al., 2011). Cognitive engagement is the student's willingness to exert the required effort, the ability to self-regulate, investment in learning and the willingness to grasp difficult skills (Fredericks et al., 2004). The three engagement domains are of equal importance in order to develop a comprehensive evaluation of student engagement differences (Fredericks et al., 2004). Cognitive engagement refers to the positive attitudes and thought processes directed towards learning. Emotional engagement refers to positive affect and feelings about school and its teachers and lastly physical engagement refers to the positive behaviours resulting in effective

involvement in school (Lyons & Huebner, 2014). The student's overall level of engagement is determined by the extent to which he or she has been involved in all three dimensions (Lippman & Rivers, 2008).

Schaufeli, Taris, & Van Rhenen (2008) refer to burnout as a commonly used term that describes mental weariness. Burnout is described as the antipode of engagement (Rothmann & Rothmann, 2010). Schaufeli et al. (2008) explain burnout as a three-dimensional construct that consists of exhaustion (fatigue and depletion of mental resources), cynicism (indifference and a distant attitude) and professional efficacy (social and non-social aspects of work accomplishments which include the tendency to rate one's performance negatively, feelings of inefficiency and lack of self-esteem in work). Burnout, as it is experienced by students, is characterised by exhaustion because of academic demands, sceptical and detached attitudes towards one's academics and feelings of incompetency and inefficiency as a student (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002a). Burnout may negatively influence a scholar's future endeavours with any form of formal education and it could be an indicator for predicting the possibility of professional burnout once they start working (Mostert, Pienaar, Gauche, & Jackson, 2007).

Learner academic engagement is globally well-recognized for understanding learner behaviour, addressing learning needs and promoting academic achievement (Appleton et al., 2008; Christenson et al., 2008). Lippman and Rivers (2008) explained that

learner academic engagement facilitates three positive educational outcomes. Firstly, it improves academic performance relating to both school grades and standardized tests. Secondly, it promotes school attendance and subsequently reduces absenteeism and dropout rates. And lastly, it reduces the prevalence of risky youth behaviours such as sexual promiscuity and drug and alcohol abuse. Despite these advantages of engagement, high levels of engagement contribute value to the learning experience and is an ultimate goal in itself (Furlong et al., 2003).

Levels of engagement are flexible and can be altered more easily than individual traits or tendencies, making it a significant construct in intervention strategies because it has the potential to evolve (Fredricks et al., 2004). This means that interventions can be directed towards improving engagement to encourage school completion (Appleton et al., 2008; Furlong & Christenson, 2008; Christenson et al., 2008). Successful engagement programmes that improve engagement include at least one of the following components: mentoring, community service, academic tutoring and life skills training (Lippman & Rivers, 2008). Research validates the importance of extracurricular activities and programmes in reducing dropout rates specifically directed towards high risk learners (Fredricks et al., 2004).

Learner engagement is regarded as a solution for the prevalent states of student apathy, alienation, indifference and motivational difficulties (Christenson et al., 2008; Furlong & Christenson, 2008). Lippman & Rivers (2008) describe a number of ways in which

learner engagement can be promoted. These include teacher support, interesting and stimulating assignments, sufficient structure to the learning process, interactive learning, support for autonomy and opportunities to learn with others. They also list the conditions that will possibly lead to learner disengagement such as lecturing to learners, an unsafe and unfair learning environment and the inconsistent or non-enforcement of school rules and policies. And lastly, Lippman and Rivers (2008) also mention that a lack of basic needs will hinder engagement in learning. These include hunger, fatigue, illness, nutritional deficiencies and using drugs or alcohol. Caraway, Tucker, Reinke, and Hall (2003) explain that many contextual and self-variables can enhance or restrict the level of school engagement activity. Contextual variables are the external influences such as the level of family support, relationships with peers, the school environment and neighbourhood characteristics. Self-variables, also referred to as internal factors, are the characteristics of an individual relating to his/her character such as perceived autonomy, relatedness, competence, goal orientation and self-efficacy.

Lietaert, Roorda, Laevers, Verschueren and De Fraine (2015) conducted research that reported a gender gap in terms in learner engagement. They explain that male learners tend to have higher dropout rates and lower levels of engagement than female learners. According to Wang and Eccles (2012), female learners had higher levels of engagement, participated more readily in extracurricular activities and had fewer behavioural concerns at school. Lam et al. (2012) conducted an international study in 12 different countries (Austria, Canada, China, Cyprus, Estonia, Greece, Malta,

Portugal, Romania, South Korea, the United Kingdom, and the United States) investigating the gender differences in engagement and academic performance in school in 3430 students from grades seven, eight and nine. Results showed that the female learners had higher levels of engagement and performed better academically. As a result, predictions for this research expected a statistically significant relationship between gender and learner engagement scores, specifically that female participants will have higher engagement scores than the males.

Learners engagement levels overall tend to decline with age for both genders in secondary school (Wang & Eccles, 2012). In addition several studies show that older adolescents report lower levels of engagement than younger adolescents, indicating a decline in engagement as they progress through high school (Marks, 2000; Wang & Eccles, 2012). As a result, predictions for this research expected a statistically significant negative relationship between age and grade levels and academic engagement scores. It is expected that as the participants' age and grade levels increase, their engagement scores will decrease.

Learner engagement may possibly be affected by developmental changes as learners become older and this may affect the choice of intervention (Christenson et al., 2008). As research indicates that learners become increasingly disengaged as they progress through school and that by high school 40% to 60% of learners are referred to as chronically disengaged (Klem & Connell, 2004; Marks, 2000). There is value in

assessing engagement learners across the three domains of engagement (cognitive, physical and emotional) to firstly identify learners who are disengaged and then to use this information to adapt teaching and out of school programmes so that learner engagement is encouraged (Lippman & Rivers, 2008). In general, there is concern that too many learners are becoming uninterested, unmotivated and disengaged from the academic and social domains of their school life (Appleton et al., 2008). Lack of school engagement can eventually lead to dropout (Caraway et al., 2003). Dropout is a slow process of disengagement from schooling that results in declining levels of involvement, decreased sense of belonging, poor academics and eventually the learner leaves school prematurely (Christenson et al., 2008). Low physical engagement, skipping class, missing school, suspension and retention are precursors to dropping out of school (Fredricks et al., 2004). These low levels of school engagement can have significant negative consequences in the long term, including substance use, teenage pregnancy and delinquency (Caraway et al., 2003). School engagement limits school dropout because increased participation in academic and other school activities improves learner performance, which again tend to increase feelings of identification or connectedness to the school and this further promotes increased school involvement (Christenson et al., 2008). Teenage mothers have on average lower educational attainment levels (Manlove, 1998). Increased levels of behavioural engagement can reduce the likelihood of dropping out of school and the possibility of falling pregnant among adolescent girls (Fredricks et al., 2004; Manlove, 1998). Manlove (1998) used data collected from 8223 female grade 8 learners in the United States of America and found that learners with higher levels of school engagement were associated with postponing pregnancy and as a result their dropout rates were lower.

Research indicates engaged learners have an intrinsic interest in learning and as a result are more likely to have higher grades, lower drop-out rates and improved psychological functioning (Klem & Connell, 2004). High levels of learner engagement improve the learning experience (Gerber et al., 2013). Learners' future performance can be best predicted by previous performance and further mediated by their engagement (Salanova, Schaufeli, Martínez, & Bresó, 2010). This makes it a valuable construct in Positive Psychology and ultimately in the education.

2.6 ACADEMIC PERFORMANCE

Academic success of adolescents is influenced positively or negatively by many factors, some of which include socioeconomic status, teaching practices, the level of education, the availability of social and extracurricular activities and learner engagement (Gerber et al., 2013). Poor academic performance and increased failure rates are related to psychological stress and negative affect while high academic achievement is related to well-being (Salmela-Aro & Tynkkynen, 2010).

It is important to note that promoting academic success of adolescents is only possible if parents, families, teachers, school administrators, counsellors, mental health professionals and the community work and interact together, as it is unrealistic to expect one setting to accomplish this alone (Caraway et al., 2003). Parental

involvement in academic success has been identified as one of the key factors contributing towards learner academic achievement (Wilder, 2014).

Previous research suggests that male learners in primary and secondary school tend to have lower engagement and achievement levels than females of the same age (Lam et al., 2012; Lietaert et al., 2015). As a result, predictions for this research expected a significant relationship between gender and academic performance in that female participants will perform better academically than their male counterparts. No research study could however be found that found a relationship between academic performance and age levels.

Academic assessment refers to an analysis which can be justified according to pre-determined and specific weighted goals or standards that produce either comparative or numerical ratings (Taras, 2005). Fredricks et al. (2004) explained that academic performance can be assessed in many different ways and as a result, the correlation between learner engagement and academic performance can be dependent on the type of assessment because different assessments reflect different dimensions of engagement. Academic performance can be measured using grades, standardised tests and teacher rating scales which focus on academic application and attitude (Wilder, 2014). Physical engagement is associated with teacher-assigned grades and test scores, whereas cognitive engagement correlations may be more visible when tests measure deep-level understanding of content (Fredricks et al., 2004). In this study, examination

grades were used to establish academic performance. The reason being that the time frame in which to collect the data was limited and examination grades provide a non-biased means of assessment. In addition these examination grades are used consistently by all schools, allowing for easy comparison between performance levels.

2.7 THEORETICAL FRAMEWORK: POSITIVE PSYCHOLOGY

This study falls within the theoretical framework of Positive Psychology because it focuses on finding solutions by understanding the importance of nurturing and developing peoples' positive attributes rather than identifying and treating their inadequacies (Seligman and Csikszentmihalyi 2000). In this study specifically, the researcher investigated how the positive constructs namely life satisfaction and learner engagement can be used to improve academic performance in adolescents in Windhoek, Namibia.

Positive Psychology is still a rather new school of thought that has thrived in recent years (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park, & Peterson, 2005). Until its introduction, clinical psychology had focused mainly on the disease model when understanding the human condition and all psychological aspects had been focused on addressing pathology (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). The aim of Positive Psychology is to direct a change in perspective from the preoccupation with disease, weakness and abnormality towards

fostering the healthy, flourishing and virtuous (Duckworth, Steen, & Seligman, 2005; Seligman & Csikszentmihalyi, 2000). The Positive Psychology movement has grown significantly since Seligman and Csikszentmihalyi edited a millennial issue of the *American Psychologist* in January 2000 dedicated to outlining the principles of this emerging science (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). Since then a great deal of research has been devoted to neglected areas within this field in such a way that gaps in knowledge about psychology are still actively being addressed (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). Positive psychologists feel that by directing their interest on developing valuable qualities and strengths, they are in fact contributing to and complimenting previous knowledge on human behaviour and functioning (Gable & Haidt, 2005). Positive Psychology research aims to complement what is already known about mental illness, suffering and pathology within the human condition so that we have a more accurate understanding of human existence (Seligman et al., 2005).

Positive Psychology is the study of the criteria and processes that have allowed for individuals, groups of people and societies to flourish and prosper so that they are functioning to the best of their ability (Gable & Haidt, 2005). At the individual level, Seligman (2002) encouraged cultivating traits such as hope, wisdom, courage and resilience, while at the group and institutional level, he emphasized virtues such as responsibility, tolerance, moderation and altruism. Positive Psychology focuses on developing positive, desirable personality traits and behaviours to ensure more complete understanding of optimal human functioning and consequently increased

quality of life (Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005). Extensive evidence suggests that most people rate their lives in a positive way and as a result we cannot use purely negative frames of references or bias to account for normal or even abnormal behaviour (Diener & Diener, 1996; Sheldon & King, 2001). Ultimately, Positive Psychology aims to encourage psychologists to acquire a more balanced and appreciative perspective of human potential (Sheldon & King, 2001).

Positive Psychology has allowed for major developments in preventing mental illness, mostly due to an increased focus on nurturing human strengths, virtues and actively increasing resilience, all which seem to act as buffers against mental illness (Seligman, 2002; Seligman & Csikszentmihalyi, 2000). Positive psychologists identified the need for developing a more comprehensive concept of mental health beyond simply the absence of depression and distress to include happiness, well-being and life satisfaction (Diener, Oishi, & Lucas, 2003). Research proposes that by identifying and appreciating the environmental and personal qualities that may prevent pathology, will in turn also provide us with the necessary skills to help others (Gable & Haidt, 2005). Positive approaches such as optimism, personal control and the ability to find meaning in an experience can promote mental and physical health (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000).

In addition, there is significance in understanding the complete spectrum of human behaviour and experience which involves both positive and negative qualities (Gable

& Haidt, 2005). Understanding the complete human condition assists psychologists in optimising the state of happiness and ultimately finding effective interventions that encourage individuals, communities and societies to thrive and reach fulfilment (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005). The purpose of Positive Psychology in practice is to ultimately broaden the scope of clinical psychology so that there is a holistic approach to mental health (Duckworth et al., 2005). In this way psychological interventions can be directed towards alleviating suffering and also cultivating happiness (Seligman et al., 2005). Increasing evidence suggests that positive interventions are effective at promoting pleasure, meaning and engagement and in turn may be useful in preventing and treating psychopathology (Duckworth et al., 2005).

2.7.1 Positive Psychology: The study of happiness

The human pursuit for happiness has been considered as the ultimate inspiration for directing human actions and ambitions (Diener, 1984; Diener, Kesebir, & Lucas, 2008). An aspect of Positive Psychology is to understand that levels of happiness differ across various individuals and how this in turn influence other aspects of functioning (Lewis et al., 2011). Happiness and well-being are the sought after goals of Positive Psychology (Seligman, 2002). Seligman (2002) challenged previous scientific evidence that happiness levels are static and cannot be changed in a sustainable way by introducing Positive Psychology as providing the means for individuals to increase and maintain their happiness. This study incorporates this focus of Positive

Psychology in developing and attaining happiness because life satisfaction, one of the constructs of this study is an element of happiness and well-being.

Based on a review of literature, the conceptual framework of happiness in psychology has three distinct components namely pleasure (a positive emotion), engagement in the form of gratification and meaning (Duckworth, et al., 2005; Seligman, Parks, & Steen, 2004; Seligman et al., 2005). According to Seligman et al. (2004) the first route to happiness is a pleasure- seeking and hedonic one influenced by the hereditary and evolutionary nature of our positive affectivity. As a result, our emotions can only vary within a genetically predetermined range. These authors explain that the second route to happiness involves the pursuit of ‘gratification’. Gratification completely absorbs and engages us and while there may be shortcuts to pleasure-seeking, there are none to gratification. Gratifications necessitate the need for us to rely on utilising individual strengths such as creativity, social intelligence, sense of humour, perseverance and an appreciation of beauty and quality. Lastly, Seligman et al. (2004) postulate that a third route to happiness fulfils our need to find purpose and meaning in life by belonging to and ultimately serving a purpose greater than ourselves. These can include knowledge, goodness, family, community, politics, justice or a higher spiritual power. These three happiness constructs can be measured within the clinical setting using valid and reliable assessment tools (Duckworth, et al., 2005). In this way Positive Psychology and happiness can give a more perceptive and balanced assessment of overall mental health and functioning by not simply focusing on pathology and the negative aspects.

Extensive research since 2000 implies that happiness is associated with a variety of successful outcomes and desirable characteristics on both individual and societal levels (Diener et al., 2008; Lyubomirsky et al., 2005a). Happiness cultivates optimal functioning and promotes thriving across a variety of domains (Diener et al., 2008). Lyubomirsky et al. (2005a) suggested a conceptual model explaining why happy individuals tend to be more successful across multiple areas in life, reasoning that the link between success and happiness is interchangeable. This would mean that achieving success could make individuals happy, and in turn happiness can generate success. Happy people are predisposed to a frequent positive affect which prompts them to be confident and optimistic individuals so that they work enthusiastically towards new goals, acquiring desirable characteristics and building new resources (Lyubomirsky et al., 2005a).

Pursuing happiness remains an important objective for so many people. However, there is still limited research focused on approaches that facilitate acquiring, increasing and sustaining happiness levels (Lyubomirsky, Sheldon, & Schkade, 2005a). Lyubomirsky et al. (2005a) suggested that this lack of scientific research may be attributed to pessimism related to the concepts of genetic determinism and hedonic pleasure-seeking adaptations. Genetic determinism describes a genetic predisposition for a specific level of happiness based on a stable set point for happiness we have each inherited (Lyubomirsky et al., 2005b). According to Lyubomirsky (2010) hedonic adaptation refers to this strong and consistent baseline of well-being that each individual is reduced to despite the extent of their positive or negative influences.

Lyubomirsky et al. (2005b) propose that any increase in happiness is only temporary because humans are able to adapt quickly to change resulting in any subsequent effects on well-being diminishing or disappearing. These pessimistic theoretical viewpoints suggest that with time and influence, overall happiness cannot be increased (Lyubomirsky et al., 2005b; Lyubomirsky, 2010; Sheldon & Lyubomirsky, 2012).

Lyubomirsky et al. (2005b) noted that evolving sources of optimism exist that may contribute to permanently increasing happiness in a sustainable way when it is actively pursued. These researchers suggested that chronic happiness levels are influenced by three aspects, namely, a genetic predisposed happiness set point, happiness-relevant circumstantial factors and happiness-relevant intentional activities and behaviours. As mentioned in the above paragraph, Lyubomirsky et al., (2005b) also explained that the individual's happiness set point is genetically pre-determined, fixed, stable and unchangeable with time. Chronic happiness levels can, however, be influenced by factors and variables in such a way that they fall within the lower or upper section of their potential genetic range. These include circumstantial factors which contribute 10 percent to the chronic happiness level and intentional activities that can make up 40 percent of the chronic happiness level (Lyubomirsky et al., 2005b). Circumstantial factors are incidental but relatively stable and include the person's geographical location, cultural influences, demographic factors (age, gender, and ethnicity), marital status, occupation, income, health status, and religious associations (Sheldon & Lyubomirsky, 2007). Intentional activities describe activities or practices in that

people decide to engage in what could potentially facilitate sustainable happiness levels more so than circumstantial factors (Sheldon & Lyubomirsky, 2006).

Seligman et al. (2005) highlighted the importance of developing psychological interventions that build happiness because of the causal efficacy of happiness. The authors tested five supposed happiness interventions and one acceptable control exercise. Each intervention was implemented via the Internet and took a week to finish. In the placebo exercise, participants were required to document their early memories. The first exercise involved developing gratitude by writing a letter of appreciation to someone that they have never really thanked properly. In the second exercise, participants had to write about three things that went well every day for a week and then provide a causal explanation for each one. In the third exercise, each participant had to think of when they were at their best while reflecting on their individual strengths of character. The next exercise encouraged participants to identify and actively use strengths in new and different ways. The last activity asked each person to use their five best strengths as actively as possible for a week. The results showed that two of the interventions, namely, to name three good things in their life and using their identified strengths in different ways were very effective because they increased participants' overall happiness levels and reduced their depressive symptoms. This research implies that positive interventions may in fact be effective approaches to treating mental illness and suffering. They also suggested that these interventions, aimed at improving and sustaining happiness levels, may eventually and ultimately become the purpose of Positive Psychology.

2.7.2 Positive Psychology and Subjective Well-being

The common definition of happiness can be interchanged as describing the experience of positive emotions and feelings, also known as positive affect by an individual at any specific moment in time or a more general evaluation of one's life as a whole (Diener & Ryan, 2009). Subjective well-being (SWB) however, specifically refers to a more general state based on a subjective evaluation of one's life and the consequent level of well-being experienced based on these assessments (Diener & Ryan, 2009). Subjective well-being (SWB) is one of the aspects of Positive Psychology that represents an individual's cognitive and affective assessment of their life at any given moment in time (Diener, 2000).

Subjective well-being is often colloquially also referred to as happiness in psychology (Diener & Diener, 1996). Subjective well-being is experienced when individuals experience a surplus of positive emotions, are engaged and exude a satisfaction with their lives (Diener, 2000). Subjective well-being includes three domains, namely life satisfaction, positive and negative affect (Andrews & Withey, 1976; Diener et al., 1985). Life satisfaction is an individual cognitive self-assessment of overall quality of life. Positive affect refers to pleasant emotional reactions and negative affect includes the unpleasant affective states of the construct (Diener et al., 1985; Diener & Diener, 1996). Notable characteristics of subjective well-being are that SWB is a subjective measure of well-being, based on the person's own chosen criteria. SWB includes positive and negative measures and it gives a comprehensive assessment of all aspects

of the person's life (Diener, 1984). According to Diener (2000), SWB is influenced by life circumstances and societal factors, for example, higher subjective well-being scores are found within nations where basic needs are met. Cultural variables can also explain SWB scores because they influence or even redirect individual goals and values (Diener 2000; Diener et al., 2003).

2.7.3 Criticism and challenges of Positive Psychology

There are several concerns pertaining to the field of Positive Psychology and as a result it has been criticized and challenged by some theorists (Gable & Haidt, 2005; Taylor et al., 2000).

Held (2004), for example, showed how Positive Psychology encompasses an oppressive nature by emphasising the importance of having positive attitudes, thoughts and feelings as imperative ingredients of happiness. Contrary to these beliefs of Positive Psychology, Held emphasised that negativity within human nature is normal as it can be an adaptive and acquired quality of the human condition. She referred to a range of different types of negativity that can exist within the Positive Psychology movement. She mentions how people that follow this movement tend to dismiss or disregard views that do not necessarily align with the main message of Positive Psychology. Held (2004) furthermore emphasises the need for a more realistic and integrated message within the Positive Psychology movement, one that recognises that

the ability to grow, develop and cope come from an interaction of both positive and negative experiences and feelings.

According to Gable and Haidt (2005), the Positive Psychology approach differs significantly from the other branches of psychology, as it focuses on moving away from a neutral position to a positive one. Many psychologists feel that this strong focus on the positive indirectly resulted in an assumption that everything else is therefore considered negative. Gable and Haidt (2005), in addition, argue that positive psychologists sometimes tend to disregard the real negative aspects of life including pathology, illness and suffering (Gable & Haidt, 2005).

Determining what is positive and essentially good for people may prove to be most challenging as it is not necessarily a straightforward process (Gable & Haidt, 2005; Held, 2004). According to Diener and Suh (2007), three criteria can be used to establish what people consider to be positive, valuable and good. They mentioned that firstly peoples' choices and experiences determine what has value. Secondly is the satisfaction people receive from their preferences and lastly the normative ideals that are established as a result of value systems, religious beliefs or cultural norms that people associate with. These quality measures sometimes conflict with one another, proving that defining what is good and positive is a complicated and multifaceted process (Gable & Haidt, 2005). This should be taken into account when developing theories and acquiring greater understanding of Positive Psychology.

Norem and Chang (2002) noted that people are complex and in order to appreciate the intricacy and originality of each individual, “a one size fits all model” cannot work. The complex human personality cannot be over simplified in an effort to understand or equate psychological processes, success and happiness. As a result, one’s approach should depend on the person or situation that is being dealt with. Optimism is a desired trait in Positive Psychology that facilitates satisfaction and overall well-being but there are times where pessimism can be beneficial too. Norem and Chang (2002) explained that defensive pessimism can be beneficial to individuals in achieving goals because by setting low expectations, they are able to devote their time and energy on all possible negative outcomes, making them better prepared. Norem and Chang (2002) examine how the advantages and disadvantages of various forms of optimism and pessimism may vary according to personalities, settings and social frameworks. Specifically, they use research pertaining to defensive pessimism in order to clarify how pessimism and negative thinking can in fact be linked to Positive Psychology as it can ultimately lead to growth and improved functioning.

2.7.4 Positive Psychology and adolescents

Positive Psychology research directed towards adolescents and children is still limited (Linley & Proctor, 2013). Increased quality of life and the ability to function optimally enables adolescents to nurture positive emotions and strengthen their characters (Gable & Haidt, 2005; Lee Duckworth et al., 2005; Seligman & Csikszentmihalyi, 2000). Positive Psychology provides the framework to improve the mental health of

adolescents by inspiring them to develop the necessary skills and emotions to direct their lives and become happy and flourishing adults (Kelley, 2004).

2.7.5 Positive Psychology and education

There has been a general shift away from the traditional approaches of education emphasising academic performance to a more holistic one in which schools facilitate overall development and promote the well-being of the whole child (Green & Norrish, 2013). Positive Psychology in education has resulted in more preventative and proactive approaches as opposed to previous methods directed towards treating the symptoms of special learning needs and behaviour problems in schools. (Green & Norrish, 2013).

Seligman, Ernst, Gillham, Reivich, & Linkins (2009) defined positive education as a combination of traditional skills and happiness. These authors discussed the role and importance of Positive Psychology in education. They explained that positive education embraces traditional skills and methodologies while facilitating happiness and well-being. Youth groups worldwide are progressively being characterised by increasing rates of depression and small rises in life satisfaction (Lewinsohn, Rohde, Seeley & Fischer, 1993; Seligman et al., 2009). Seligman et al. (2009) mentioned that because there is an interaction between positive emotions and learning, there is sufficient justification that the skills to develop and sustain happiness should be taught and consolidated in schools. Three crucial reasons were given for teaching well-being

in schools, firstly that it prevents or alleviates depression, secondly, because it generates an increase in life satisfaction and lastly, it contributes to improved learning and creative thinking (Seligman et al., 2009).

Shoshani and Steinmetz (2014) appraised a Positive Psychology school-based intervention programme which attempted to improve the mental health of all learners and staff in a school. In this two-year longitudinal study, they promoted well-being by administering interventions. The results of this study suggest that there are significant decreases in general distress, anxiety and depression symptoms, while there were improvements in self-esteem, self-efficacy and optimism. These findings validate the significance and potential advantage of Positive Psychology interventions in schools and the need to promote happiness and well-being in education.

2.7.6 The future of Positive Psychology

The purpose of Positive Psychology in the future is to understand all aspects that will allow for optimum human functioning by understanding what fosters strength and resilience and outlining the value of positive experiences and relationships with others (Gable & Haidt, 2005). In the long-term, Positive Psychology needs to develop interventions that will promote these factors resulting in improved physical health and subjective well-being, healthy communities and thriving institutions (Gable & Haidt, 2005; Seligman et al., 2005). In terms of education, Positive Psychology can be

instrumental in developing programmes aimed at helping learners and students to develop psychologically, socially and academically (Green & Norrish, 2013; Linley & Proctor, 2013; Shoshani & Steinmetz, 2014). In addition, Positive Psychology continues to strive towards recognising the significance in understanding that there is balance and interconnectivity between human strengths and human weakness (Gable & Haidt, 2005).

2.8 BROADEN-AND-BUILD THEORY

Subjective well-being offers advantages that increase positive emotions which in turn function as facilitators and motivators for the development of more adaptive behaviour (Diener & Ryan, 2009). Fredrickson's (2001) broaden-and-build theory is a relatively new evolutionary model that postulates the phenomena of experiencing frequent positive emotions such that they expand cognition and this in turn develops an individual's physical, intellectual, interpersonal and psychological resources over time. High subjective well-being and positive affect generate the conditions from which individuals feel confident enough to explore their surroundings, target new goals and consequently gain important personal resources and skills that improve their ability to thrive (Fredrickson, 1998).

Positive emotions widen the arrangement of thoughts and actions, enabling generativity and increasing developmental and behavioural flexibility (Fredrickson &

Losada, 2005). Broadened mind-sets have long-term adaptive value because they develop lasting and valuable personal resources like social connectedness, coping strategies and improved exploratory behaviour which in time improves cognitive interpretations and subsequent environmental knowledge (Fredrickson & Losada, 2005). This theory of subjective well-being does not regard subjective well-being as an epiphenomenon, but rather explains that frequent positive emotions offer an adaptive advantage which ultimately promotes evolutionary success and survival (Diener & Ryan, 2009). As a result, these positive outcomes accumulate and compound with time, transforming people into healthier, more knowledgeable, socially aware and resilient individuals (Fredrickson & Losada, 2005). These enduring resources are critical to successful performance in school (Lyon & Huebner, 2014).

Lewis et al. (2011) explain that with respect to education, negative emotions can restrict individual cognition and thinking resulting in undesired action tendencies such as the stress fight or flight response. Negative emotions such as anxiety, sadness or fear can hinder learning, restrict interactions and limit positive coping behaviour in the classroom. In contrast, positive emotions such as motivation and optimism can broaden individual viewpoints, increase learner attention to learning and also increase flexibility to respond (Lewis et al., 2011).

Extensive research suggests that happy people are successful in many areas of life as they strive to work towards new goals while experiencing these positive emotions

(Lyubomirsky et al., 2005a). Positive emotions are, therefore, worth researching and nurturing in order to promote psychological progress, well-being and overall functioning (Fredrickson, 2001). This includes improved engagement and better academic performance for adolescents.

This study contributes to this Positive Psychology paradigm because high life satisfaction and learner engagement are positive qualities that may facilitate human flourishing. Life satisfaction is a proxy for many positive emotions (Lewis, et al., 2011) and this study investigates its influence on enhanced learner functioning and greater availability of coping resources by cultivating learner engagement and possibly improving academic performance. As a result, the research fits with Fredrickson's (2001) broaden-and-build theory of Positive Emotions because it investigates the principle that positive emotions and well-being motivate positive changes in behaviour that may eventually better prepare humans to survive and prosper (Veenhoven, 2009).

2.9 EDUCATIONAL ENVIRONMENT

Within the education framework, positive psychology and the relationship between well-being specifically life satisfaction and school achievement have received very little academic attention (Lewis et al., 2011).

In terms of education, Zarrett and Eccles (2006) explain that although high school may be a time of educational growth and achievement for some adolescents, it can also be characterised by underperformance, lack of interest, self-confidence concerns and distorted self-perceptions of ability in others. As a result, certain groups of adolescents are more at risk of academic failure and dropout. A rewarding school life is an important developmental task of adolescence and the successful completion of school-related challenges helps smooth the transition from adolescence into adulthood, promoting individual well-being (Schulenberg, Bryant, & O'malley, 2004; Schulenberg, O'Malley, Bachman, & Johnston, 2005). High life satisfaction can be expected to ease this transition from adolescence to adulthood as life satisfaction provides the adaptive functioning skills to assist youngsters to deal with school-related challenges (Gilman & Huebner, 2006).

A school environment that is conducive to learning can be highly influential in increasing engagement levels of learners (Lippman & Rivers, 2008). Thus, higher engagement levels with learners were found to be more common in schools with healthy learner support systems, caring teachers and an active school community (Lippman & Rivers, 2008).

Worldwide there is a great need to improve education developments and reforms so that they incorporate programmes and strategies directed at improving learner and student well-being and academic success (Lyons & Huebner, 2014). Cohen (2006)

states that educational institutions need to broaden their aims and reframe educational policies to include not only academic learning but also social, emotional and ethical competencies. If studies like this one continue to validate the relationship between academic performance, life satisfaction and learner engagement, suggesting that they are in fact interrelated, they can contribute to education practices that promote learner well-being and academic success (Lyons & Huebner, 2014).

2.10 RESEARCH FINDINGS

Previous research with adults has indicated that high life satisfaction predicts positive outcomes and successes in many areas of life (Lewis et al., 2011). Reschly, Huebner, Appleton, and Antaramian (2008) investigated the role of positive emotions that learners experienced during a school day in adaptive coping and learner engagement among a sample of 293 adolescent learners in grades 7 to 10. Results of this study indicated that when learners experienced positive emotions frequently during a school day, they also reported higher levels of learner engagement. The presence of positive emotions was thus related to adaptive coping, which in turn influenced learner engagement. The results comply with fundamental principles of the broaden-and-build theory that by experiencing frequent positive emotions, people expand and develop their psychological resources (Fredrickson, 2001). Positive emotions facilitate learning by broadening a person's viewpoint, improving focus and encouraging more interaction and response (Lewis et al., 2011).

In a study by Lewis et al. (2011), researchers investigated an association between life satisfaction and all three measures of learner engagement. Some 779 learners from an American middle school completed life satisfaction and engagement questionnaires. They found a statistically bidirectional relationship between life satisfaction and the cognitive aspect of engagement during these transition grades between primary and high school; however, there was no significant relationship between life satisfaction and emotional and behavioural engagement.

However, researchers have also challenged and refuted the extent of the positive emotions approach and its implications on human flourishing. For example, Fredrickson and Losada (2005) were concerned that experiencing very high states of positive emotions may be indicative of mania and hysteria, excessive optimism or a defective emotion system.

Oishi, Diener, and Lucas (2007) introduced the concept of reaching an optimum level of happiness after observing a trend that moderately happy people with slightly lower levels of happiness achieve the most success in terms of education and earnings. They surveyed 193 college students in Illinois and found that students in the group with the highest happiness scores had the lowest academic grade-point averages, lower levels of conscientious and more school absences.

More recently Lyons and Huebner (2014) investigated this negative quadratic relationship that too much happiness will not necessarily produce the best results in school, but findings concluded that high levels of life satisfaction increase learner engagement and academic performance in middle school learners. They found statistically significant positive linear relations between life satisfaction and grade point average (GPA), mathematics standardized test scores and cognitive, emotional and behavioural engagement. This linear relationship was not, however, observable between life satisfaction and English standardized test scores.

There are still very few studies investigating the connection between life satisfaction and educational attainment (Lewis et al., 2011; Lyons & Huebner, 2014). Research about life satisfaction and academic functioning give a variation in findings (Lewis et al., 2011; Lyons & Huebner, 2014). Some studies suggest that high life satisfaction is related to greater academic achievement (Gilman & Huebner, 2006), whilst other studies indicate that high levels of life satisfaction reduce efficiency and are not always optimal for pursuing certain life goals (Oishi et al., 2007). Bradley and Corwyn (2004) in their study of contextual and personality factors and their relation to perceived life satisfaction among adolescents in five different sociocultural groups namely European American, African American, Chinese American, Mexican American, and Dominican American described the relationship between life satisfaction and academic achievement as being non-significant.

Schaufeli et al. (2002a) investigated burnout and engagement in 1661 university students and found that the burnout and engagement subscales were negatively correlated and that there was a positive relationship between engagement and academic performance. Frisch et al. (2005) found that higher levels of life satisfaction predicted lower dropout rates among college students over a period of 12 to 26 months.

Most research does acknowledge a positive relationship between the life satisfaction, learner engagement and academic performance (Lewis et al., 2011; Frisch et al., 2005; Gilman & Huebner, 2006, Reschly et al., 2008; Schaufeli et al., 2002a). However, given the limited research and contradictory conclusions about relationships between learner life satisfaction, engagement and academic functioning, there is significance in additional research to clarify these relationships in terms of direction and strength.

2.11 THE NAMIBIAN CONTEXT

The global economy is demanding and requires knowledgeable employees that can generate, integrate and evaluate new information quickly, think critically and exhibit advanced problem-solving skills (Fredricks et al., 2004). It is essential that youth are committed to learning if they are to truly benefit from the schooling experience and acquire the necessary skills and knowledge to pursue tertiary education or enter the demanding workforce of today (Fredricks et al., 2004). According to the Vision 2030 National document (2004), Namibia is striving to become a knowledge-based society

characterised by “a totally integrated, unified and flexible, and high quality education and training system” (p. 30).

The continuous improvement of education is an important goal for the Namibian government and as a result, education has received the largest share of the national budget since Namibian Independence (Mwinga, 2011; Nunuhe, 2015). Namibia’s education system comprises of seven years of primary and five years of secondary education. Education is compulsory from the age of six up to the end of primary school or up to the age of 16, whichever is sooner (Voigts, 1998). In 2015, only 13 172 of the 61 159 Grade 12 candidates wrote one or more subjects on Higher Level (Republic of Namibia Ministry of Education, Arts and Culture, 2015). Nakale (2015) reported that of the 19392 full-time candidates that wrote the Grade 12 Namibia Senior Secondary Certificate Ordinary level examinations the previous year, only 8300 (43%) qualified for admission into tertiary institutions.

Dropout rates are the percentage of learners in a grade during the school year who no longer attend school the following year. Haidula (2016) highlights that dropout rates of learners in schools are a serious concern in Namibia. Statistics released by the Education Management Information System (EMIS) in March 2016 show that in 2011 and 2012, more than 22 000 pupils dropped out of school for a variety of reasons like marriages, hunger, pregnancies, long distances to school, loss of interest and illness. Kangootui (2016a) explained that in 2011 alone, 11 641 learners dropped out of

Namibian schools, while 10 466 learners discontinued school in 2012. The major cause of the high dropout rates in Namibia is pregnancy, causing 2 896 girls and involved boys to leave school in 2011 and 2012 (Kangootui, 2016a).

Recently teenage pregnancy in Namibia has received a great deal of attention with the honourable First Lady of Namibia, Monica Geingos, opening up about her own experiences but also pleading with parents to be actively involved with their children (Kangootui, 2016b). Namibia has a young population, with 66% of its population below the age of 30 (DHS, 2006/07). In 2013 statistics showed that 19% of the women in Namibia between the ages of 15 and 19 were pregnant or had at least one child. This number, however, has since increased (DHS, 2013; Kangootui, 2016b).

Statistics showed that only 67% of Namibian children will attend lower secondary school (grades 8 and 9) (DHS, 2006/07). The repetition rate of learners in grade 8 is 30%, whilst the repetition rate for learners in grade 9 is 22%. Both are worryingly high (EMIS, 2012). According to the Regional Education Analysis for Namibia (2013) the dropout rates in these junior secondary grades are high and only 43% of the learners on average will reach grade 10. The grade 10 Junior Secondary Certificate (JSC) exam is a national examination written at the end of grade 10. On average, only half the Namibia learners pass the exam every year and are eligible for senior secondary education. The statistics are varied, with private schools having better pass rates than public schools (63% vs. 48%). To improve learning outcomes and results for the

Namibian secondary school learners, it is imperative that stakeholders understand what distinguishes the factors that facilitate and impede effective learning, which can positively impact the entire Namibian education system. These worrying Namibian academic statistics facilitate the prediction that the academic performance levels of this group of learners will be below average.

As mentioned previously, learner engagement is recognised as valuable construct in improving academic performance in school grades and standardised tests because it facilitates learning needs and outcomes (Appleton et al., 2008; Christenson et al., 2008; Lippman & Rivers, 2008). Lippman and Rivers (2008) explained that learner engagement also promotes school attendance resulting in reduced absenteeism, repetition and dropout rates. In addition, there is evidence that engaged adolescent learners are less likely to be involved in sexual promiscuity, substance abuse or fall pregnant (Lippman & Rivers, 2008; Manlove, 1998). There is no information readily available in order to predict possible engagement levels of this group of learners for this research. However, reflecting on the information highlighting the benefits of engagement, the researcher predicts that this group of learners will have below average engagement levels. Namibian statistics indicate high repetition rates, worrying dropout rates, average pass rates and a large percentage of teenage pregnancies (DHS, 2013; EMIS, 2016; Kangootui, 2016b; Shalyefu, 2012). Dropout, repetition rates and poor academic performance are all associated with lower levels of engagement (Christenson et al., 2008).

The Namibia Labour Force Survey (2013) reported that the Namibian unemployment rate was 29.6 percent in 2013, which was a 2.2 percent increase from 27.4 percent in 2012 (Namibia Labour Force Survey, 2013). An area of concern was the employment rates among the youth aged 15 to 34, which increased to 41 percent from 37 percent in 2012 (Francis, 2014). In 2013 statistician John Steydler released the Namibia Labour Force Survey 2012 and referred to our unemployment rates as “very high” (Duddy, 2013). He noted that there is a definite relationship between level of education and employment rates (Duddy, 2013). In 2013, individuals in Namibia with university degrees had an unemployment rate of 7.2 percent, trained teachers 5.8 percent and people with a post graduate qualification had an unemployment rate of 1,9 percent. Education levels that reflected the highest unemployment rates were those with grade 10 at 36.6 percent and primary education at 31.7 percent (Francis, 2014). The worrying factor about the current employment situation in Namibia is the surplus amount of unskilled labour and tremendous shortage of qualified and educated individuals (Shalyefu, 2012). The lack of skilled labour is attributed to the high dropout rate of learners from primary and secondary school (Shalyefu, 2012).

2.12 SUMMARY OF LITERATURE REVIEW

This chapter gave an overview of the literature pertaining to this investigation by introducing and explaining the theoretical background relating to the constructs of life satisfaction, learner engagement and academic performance. Adolescence was defined and described in detail, specifically highlighting the turmoil and change associated

with this developmental stage. The researcher explained how the broaden-and-build theory of positive emotions is an evolutionary mechanism to improve existence and survival. This theory offers an explanation for the positive relationships between the variables that the researcher hypothesized. Positive emotions are valuable and worth researching in an effort to encourage psychological progress, happiness and improved functioning.

Positive Psychology outlines the theoretical framework of this research and it is defined as a scientific understanding of the significance of positive qualities, strengths and virtues that enable individuals, groups, communities and institutions to thrive and prosper. It is founded in the belief that human beings want to lead meaningful lives by embracing their potential so that they nurture what is best within themselves and as a result experience optimal functioning which in turn enhances their life experiences. Positive Psychology aims to change the approach of psychology by facilitating personal growth instead of focusing primarily on suffering and treating pathology. Positive psychologists understand that it is important to embrace all aspects of human nature and functioning in order to develop efficient interventions. Ideally psychological interventions are directed towards increasing and sustaining levels of happiness.

Positive Psychology has a role in education in that positive teaching approaches and interventions can be effective because of the synergy between learning and positive

emotions. Positive education can foster happiness and well-being among children and adolescents. It is because Positive Psychology seems to have a greater role in achieving educational goals and aspirations as it addresses the learner well-being that the author of this study chose to use this conceptual framework in directing this study pertaining to life satisfaction, learner engagement and academic achievement in adolescents.

Past research involving life satisfaction, learner engagement and academic performance was also discussed. Studies on life satisfaction, engagement and academic performance in adolescents are limited. No similar studies have been conducted on adolescents in Namibia. Finally, the researcher gave a detailed account of the educational background in Namibia. This explained that specifically, the high dropout rates and poor academic results are a serious concern. Research indicates that by improving learner engagement, we may be able to address these concerns. The literature review also explained the importance of improving the education status in Namibia in order for us to become a more economically stable country with reduced unemployment rates and unskilled labour

CHAPTER 3

3 METHODOLOGY

3.1 INTRODUCTION

This chapter will look at the methods and procedures that were followed in order to fulfil the research objectives and operationalise the variables. It gives a clear and sequential explanation as to how this study was conducted and the rationale as to why specific procedures and instruments were selected for this study. The research design, sampling method and research instruments' specifications are also given. The chapter also describes the data collection process, what research ethics were adhered to and how the data was analysed.

3.2 AIMS AND OBJECTIVES

This thesis is an analysis of the levels of and relationships between life satisfaction, learner engagement and academic performance in adolescents in selected public secondary schools in Windhoek, Namibia. The research questions of this study are as follows:

- What are the levels of life satisfaction among adolescents in selected public secondary schools in Windhoek, Namibia?
- What are the levels of learner engagement among adolescents in selected public secondary schools in Windhoek, Namibia?

- What are the average academic performance scores among adolescents in selected public secondary schools in Windhoek, Namibia?
- Is life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia, related in any way and if so, how?
- Do age, gender and grade differences influence life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia?

3.3 HYPOTHESES

The hypotheses were based on the research aims and objectives of the study that were outlined above. The hypotheses aim to predict correlations and relationships between the life satisfaction, learner engagement and academic performance variables. The theoretical framework and literature review in chapters 2 and 3 offer a foundation on which the hypotheses are based and formulated:

Hypothesis 1: Adolescents in selected public secondary schools in Namibia have satisfied (above average) levels of life satisfaction.

Hypothesis 2: Adolescents in selected public secondary schools in Namibia have below average levels of learner engagement.

Hypothesis 3: Adolescents in selected public secondary schools in Namibia have below average academic performance levels.

Hypothesis 4: There is a significant positive correlational relationship between life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia.

Hypothesis 5: There is no significant relationship between gender and life satisfaction but there is a significant relationship between gender and learner engagement and academic performance among adolescents in selected public schools in Windhoek, Namibia. It is expected that female learners will be more engaged than male learners.

Hypothesis 6: There is no significant relationship between grade differences and life satisfaction and academic performance but there is a significant relationship between grade differences and learner engagement among adolescents in selected public schools in Windhoek, Namibia. It is expected that learner engagement levels will decrease as the grade level increases.

Hypothesis 7: There is no significant relationship between age differences and life satisfaction and academic performance but there is a significant relationship between age differences and learner engagement among adolescents in selected public schools in Windhoek, Namibia. It is expected that learners' engagement levels will decline with an increase of age.

Hypothesis 8: There are significant and predictive interchangeable relationships between the constructs of adolescent life satisfaction, learner engagement and academic performance.

3.4 RESEARCH DESIGN

This is a quantitative, cross-sectional and descriptive study as it will look at correlations between adolescent life satisfaction, learner engagement and academic performance. Quantitative research is the systematic investigation and explanation of phenomena by gathering numerical data which is then analysed using statistical tests (Gravetter & Forzano, 2006). Cross-sectional studies investigate information about individuals at a specific point in time (Gravetter & Forzano, 2006). A descriptive study describes, gives details and interprets the characteristics of a situation, social environment or population at a defined place and time (Neuman, 2014). Descriptive studies describe phenomena or populations without providing causal explanations of how, why and when the occurrences transpired (Blanche, Durrheim, & Painter, 2006). The survey research method was used. A survey contains a variety of measures to gather data, in this study specifically about adolescents with life satisfaction, learner engagement and academic performance. A survey is designed to collect data from a specific population or a sample of that population and generally uses a questionnaire or an interview as the survey instrument (Rumsey, 2010). Survey studies have a number of advantages in that they are fast, cost-effective, they can generate large amounts of information in a short period of time which can easily be quantified, but they do have their disadvantages in that questions can be misinterpreted or the participant may answer in a way that they think will please the researcher (Neuman, 2014).

3.5 POPULATION AND SAMPLING

The target population for this research study consisted of learners from grades 9 to 11 attending public secondary schools in Windhoek, Namibia. There are 24 public secondary schools in Windhoek (source).

Sampling involves the selection of the research participants in such a way that they are representative of the population the researcher intends to draw conclusions on (Blanche et al., 2006). Descriptive studies rely on representative samples so that accurate estimates and conclusions of the population's properties can be made (Blanche et al., 2006).

The researcher selected nine schools in which to do the research, the three lowest-performing, three middle-performing and three top-performing public secondary schools according to the national 2015 NSSCO (Namibia Senior Secondary Certificate for Ordinary level) examination results. This was done with the intention of gathering a reflective sample of learners with different ability levels and from a range of circumstances and influence.

Stratified convenience sampling was used to draw the sample from each school that was selected to take part in the research. According to Blanche et al. (2006), by using the stratified sampling method, the researcher aims to establish a larger degree of representativeness when dealing with populations that consist of several groups or

strata. As a result, the population is then drawn from each stratum independently. Convenience sampling meant that participation depended on the willingness and availability of the learner to participate and contribute to the study as well as the consent of the parent (Collins et al., 2000). As a result, the first 20 learners (10 boys and 10 girls) from each grade level at each school that fulfilled these requirements were selected as the participants.

With stratified convenience sampling, 20 learners from each grade (9, 10, and 11) from each school were selected ($n = 540$). Equal numbers of male and female learners were selected for this study. This meant that of the 20 learners from each grade in each school, 10 were girls and 10 were boys. This gave a total of 60 learners that were selected per school ($9 \text{ schools} \times 60 \text{ learners} = 540 \text{ learners}$).

3.6 RESEARCH INSTRUMENTS

Four measuring instruments were used in this study, namely the researcher-developed biographical questionnaire, the Multidimensional Students' Life Satisfaction Scale (MSLSS), the Work Engagement Scale (WES) and an academic self-report section in which each student filled in their subjects and corresponding grades they obtained in the most recent examination session, April 2016. These four measuring instruments were compiled and bound in questionnaire booklets (Appendix 5) that each participant was anonymously required to fill out under the direction of the researcher.

3.6.1 Biographical Questionnaire

The biographical questionnaire is the first part of the questionnaire booklet (Appendix 5). It is a five-item, researcher-developed measure. It is used to collect information about the participant relating to gender, age, grade, whether any grades were repeated in the past and what school the participant is attending at present. The participants are instructed to write the details required in the spaces provided.

3.6.2 Multidimensional Students' Life Satisfaction Scale (MSLSS)

The Multidimensional Students' Life Satisfaction Scale (MSLSS) as developed by Huebner (1994) was used to measure life satisfaction of learners in this study. This self-report scale is the second part of the questionnaire booklet (Appendix 5). Research has established acceptable psychometric properties for the MSLSS and that it is an effective research tool for assessing life satisfaction levels in children and adolescents (Huebner & Gilman, 2002).

3.6.2.1 Rationale and Description of Instrument

It is designed for children and adolescents from ages 8 to 18 across a wide range of ability levels (Huebner, 1994; Huebner & Gilman, 2002). The manual (Huebner, 2001) explains that the measure has 40 items (e.g. "My friends are nice to me"), which learners rate on a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree) for each question. The items are easy to read and understand, making it accessible to and comprehensible for different ability levels. The MSLSS assesses life satisfaction across five distinct domains, namely family, friends, school, living

environment and self at the time of measurement. The family domain has seven items, the friends domain has nine, the school domain has eight, the living environment domain has nine and the self domain has seven items. The table below shows which items of the MSLSS belong to each domain.

Table 3.1 MSLSS domains and items

Domain	Items
Family	7, 8, 18, 19, 21, 28, 30
Friends	1, 4, 11, 12, 16, 23, 24, 29, 38
School	3, 6, 9, 13, 20, 22, 25, 26
Living environment	15, 27, 31, 32, 34, 36, 37, 39, 40
Self	2, 5, 10, 14, 17, 33, 35

3.6.2.2 Administration, Scoring and Interpretation of Instrument

According to the Manual for the Multidimensional Students' Life Satisfaction Scale (Huebner, 2001), the 40-item MSLSS can be administered both individually and in a group setting. Instructions for the scale are given before the rest of the scale, but directions can be read aloud if necessary, especially with younger learners. The readability level of the scale is at a grade 1.5 level. This ensures that most learners need very little or no help in answering the questions. The scoring of the scale is simple in which the 6-point format is more typically used for middle and high school learners (Huebner, Laughlin, Ash, & Gilman, 1998). The 6 possible responses are allocated points as follows: (strongly disagree = 1); (moderately disagree = 2); (mildly disagree

= 3); (mildly agree = 4); (moderately agree = 5) and (strongly agree = 6). The negatively-keyed items must be reversed so that the points reflect the change in life satisfaction. The negatively-keyed items are numbers 3, 4, 9, 13, 23, 24, 27, 32, 34 and 39. The 6 possible responses for these negative items are allocated points as follows: (strongly disagree = 6); (moderately disagree = 5); (mildly disagree = 4); (mildly agree = 3); (moderately agree = 2) and (strongly agree = 1). The scale represents a minimum score of 40 and a maximum score of 240. The overall score for the MSLSS is calculated by totalling the scores for each item, with equal weights. As a result, the higher the score obtained, the higher the level of global life satisfaction. As the domains consist of unequal numbers of items, the domain and the corresponding score are made comparable by finding the sum of the items applicable to that domain and then dividing it by the number of items in that subscale. Comparisons can then be made with the total life satisfaction scores by similarly dividing the total score by the 40 items. All tallying, scoring and interpretation of the MSLSS data were performed using the SPSS 23.0 (SPSS, 2015) statistical programme.

3.6.2.3 Reliability and Validity of Instrument

Research has established acceptable psychometric properties for the MSLSS (Huebner, 1994; Huebner et al., 1998). Reliability by means of internal consistency, Cronbach alpha coefficients was satisfactory in various publications ranging from .70s to low .90s (Greenspoon & Saklofske, 1997; Huebner, 1994; Huebner et al., 1998). Test-retest coefficients have been described for two- and four-week time periods, showing that the scores do correlate (Huebner, 2001). In terms of validity, the results of exploratory and confirmatory factor analyses have supported the dimensionality and

hierarchy of the MSLSS (Huebner, 1994; Huebner & Gilman, 2002). There is convergent and discriminant validity through predicted correlations with other similar self-report well-being indexes, parent reports, teacher evaluations and social desirability scales (Huebner, 2001; Huebner & Gilman, 2002).

In this current study, the MSLSS had a Cronbach alpha coefficient of 0.77 indicating a good internal consistency and reliability for measuring this adolescent population's life satisfaction.

3.6.2.4 Motivation for Inclusion

Huebner (2001) explains that the MSLSS was designed to give a multidimensional report of life satisfaction judgements in children and adolescents. The researcher chose this instrument because it measures life satisfaction across five domains. This allowed for comparisons between total life satisfaction and satisfaction across each subscale for a more comprehensive and dimensional understanding of life satisfaction among the adolescents assessed. Reports show that domain-based life satisfaction scores reveal statistically significant variance above global life satisfaction score variance and as a result show incremental validity (Haranin, Huebner, & Suldo, 2007). The advantage of using this differentiated assessment is that it is an effective tool for diagnostic, prevention and future intervention efforts. The manual explains that the MSLSS is an effective instrument to (a) provide a multidimensional profile of children's and adolescents' life satisfaction according to five specific and relevant dimensions (b) give an accurate assessment of overall life satisfaction in individuals (c) demonstrate acceptable psychometric properties (d) offer a replicable factor

structure demonstrating the meaningfulness of the five domains and (e) be used effectively with children and adolescents across a wide age range (grades 3 to 12) and ability levels (mild developmental disabilities through to gifted individuals). It is an instrument that is easily understood, with a low readability level. As a result, learners with a range of abilities can understand and complete it. The scale has been administered to adolescents from a variety of nationalities and has consistently yielded acceptable psychometric properties (Gilman et al., 2008).

3.6.3 Work Engagement Scale (WES)

The Work Engagement Scale (WES) as developed by May, Gilson, and Harter (2004) was used to collect data about the learners' emotional, physical and cognitive engagement in their school work. This self-report scale was adapted so that it applies to schoolwork and is the third part of the questionnaire booklet (Appendix 5).

3.6.3.1 Rationale and Description of Instrument

The WES measures each participant's subjective level of learner engagement in their school work at the time of measurement. It consists of 13 items that are used in total to measure engagement (Schaufeli & Bakker, 2012). Five items are indicators of cognitive engagement whereas four items are indicators of emotional and four items are measuring physical engagement. The items were generated to measure each of Kahn's (1990) three components of engagement, namely cognitive (e.g., "I get so involved with my school work that I lose track of time"), emotional (e.g., "I am

passionate about my school work”) and physical engagement (e.g., “I feel physically strong when I study”). Participants rate their engagement on a 7-point Likert scale, ranging from 1 (never or almost never) to 7 (almost always or always) for each question.

3.6.3.2 Administration, Scoring and Interpretation of the Instrument

The WES is a short scale and it doesn’t require a lot of time to complete. It can be administered on an individual basis or in a group setting. The scale reads easily and as a result is understood by adolescents with different reading abilities. Specifically items one to five measure cognitive engagement, items six to nine measure emotional engagement and items ten to thirteen measure physical engagement. The scale represents a minimum score of 13 and a maximum score of 91. All items are scored positively. The overall score for the WES is calculated by totalling the scores for each item, with equal weights. As a result, the higher the score obtained, the higher the level of engagement. As the subscales consist of unequal numbers of items, the subscale and the corresponding score is made comparable by finding the sum of the items applicable to each subscale and then dividing it by the number of items in that subscale. Comparisons can then be made with the total work engagement scores by similarly dividing the total score by the 13 items. All tallying, scoring and interpretation of the WES data was performed using the SPSS 23.0 (SPSS, 2015) statistical programme.

3.6.3.3 Reliability and Validity of Instrument

When investigating construct validity, Cronbach alpha coefficients for the three scales of the WES were found to be .80 for physical engagement, .82 for emotional engagement and .78 for cognitive engagement in a study about factors that influenced employee engagement in South Africa (Rothmann & Rothmann, 2010). In the current study, the WES has a Cronbach alpha coefficient of 0.88 indicating a good internal consistency and reliability for measuring learner engagement.

3.6.3.4 Motivation for Inclusion

The WES was used in this study because it could assess the engagement of learners in the cognitive, emotional and physical dimensions of engagement. This also allows for a multidimensional analysis of engagement in the sample population. It was chosen because it is a simple and easily comprehensible scale for a variety of ability and age levels. There was the added benefit that it could be administered in a group setting. The scale has satisfactory psychometric properties and can be used as a global measure of cognitive, emotional and physical engagement (May et al., 2004).

3.6.4 Academic Performance Table

The Academic Performance Table is a simple table with numbered columns and it is the last section of the questionnaire booklet (Appendix 5). The learners wrote down the subjects that they were studying at school in one column and in the corresponding column, they wrote the percentage they obtained in the April 2016 examination

session. Learners were required to have a copy of their April 2016 report with them to ensure that they fill in this table correctly and accurately. Once the questionnaire booklets were collected, the researcher then calculated the overall average percentage each learner achieved (the mean percentage grade for all subjects) and filled this in at the bottom of the table. It is this mean percentage that indicated the general academic performance level for each learner in this study.

3.6.5 Factor analyses

Factor analyses reduces and summarises a large set of variables according to factors or criteria so that their interrelationship may be explored (Pallant, 2013). In this process, the smallest number of factors that best represent the interrelationships between the variables are generated. An exploratory factor analyses was conducted in order to determine the underlying factor structure of the Multidimensional Students' Life Satisfaction Scale (MSLSS) and the Work Engagement Scale (WES). Principal component analyses were used to determine the factorability of each of the scales used as well as to determine the number of factors in each scale.

A principal component analysis was conducted on the 40 items of the MSLSS. The Kaiser-Meyer-Olkin measure of sampling adequacy revealed a value of 0.882. Only factors a value of 1 or more were retained for further analysis. As a result, the items of the MSLSS are factorable. Bartlett's test of sphericity was significant ($p \leq 0.01$) with

a value of 7853.293 and $p = 0.00$. A principal component analysis was conducted and showed that five factors were extracted (eigenvalues of 8.21, 3.47, 2.99, 2.18 and 1.72 respectively). These five components explain a total of 46.427 % of the variance. Factor 1 represented the family factor, factor 2 represents the school factor, factor 3 represents friends, factor 4 is the self and factor 5 is the living environment.

A principal component analysis was conducted on the 13 items of the MSLSS. The Kaiser-Meyer-Olkin measure of sampling adequacy revealed a value of 0.921 indicating that the items on the WES are factorable. Bartlett's test of sphericity was significant ($p \leq 0.01$) with a value of 2704.718 and $p = 0.00$. A principal component analysis was conducted and showed that three factors were extracted. These three components explain a total of 59.4 % of the variance. Factor 1 represents the emotional factor and factor 2 represents the cognitive factor and factor 3 is the physical factor.

3.7 DATA COLLECTION PROCEDURE

The Multidimensional Students' Life Satisfaction Scale (MSLSS) and the Work Engagement Scale (WES) are free and public domain so the researcher could use them without permission.

The Department Human Sciences (UNAM), Faculty of Humanities and Social Sciences (UNAM), the UNAM Centre for Postgraduate Studies and the UNAM Ethics Committee approved this study. Letters were written requesting for permission from

the Ministry of Education, Arts and Culture to conduct the research in selected public secondary schools in Windhoek. A copy of the research proposal was attached with the letters. These letters were addressed to the Permanent Secretary and the Director of the Ministry of Education, Arts and Culture for the Khomas Region (Appendix 1). After permission was obtained from these relevant stakeholders, the researcher could proceed with the data collection process.

Questionnaires were designed by incorporating the biographical questionnaire, Multidimensional Students' Life Satisfaction Scale (MSLSS), the Work Engagement Scale (WES) and the academic performance self-report into one booklet for easy use by the participants. Questionnaire booklets were printed and bound by professional printers (Appendix 5).

The researcher drafted letters to the principals of the nine schools that were identified to be part of the research population (Appendix 2). The permission letters from the Permanent Secretary and Director of Education, Arts and Culture were attached. The schools were contacted and meeting dates were set up with each principal. The principals were briefed regarding the purpose of the study, expectations, ethical practices that would be followed and assured that the learners' well-being was of the utmost importance to the researcher. After meetings with each principal, permission was granted and they then set up meetings with their respective life skills teachers to help with the data collection process. The life skills teachers distributed the parental

consent forms to grades 9, 10 and 11 learners of the school (Appendix 3). The researcher was then contacted once the appropriate number of signed forms had been returned (20 from each grade). Each participant gave their assent to participate in the research by signing a form (Appendix 4). A suitable testing time was then decided upon for each grade in which the researcher would distribute the booklets among the learners for completion. A time was chosen that was convenient to all involved parties. The learners were reminded to bring a copy of their April 2016 school report or the life skills teacher provided the researcher with a copy of the academic schedules containing the exam grades for each learner.

The research questionnaires were administered to learners in a group setting. As the groups were relatively small, the researcher administered the process herself. The researcher explained the purpose of the research and clarified the expectations from each participant. Once the questionnaire booklets were distributed, the researcher read through the instructions with the learners and explained each section to them. Participants were made to feel comfortable and familiar with the ethics of the research. Learners were allocated 30 minutes to answer everything. Learners who had brought copies of their reports, filled in the academic section as well. Learners that did not bring their reports, left that section blank. The researcher then used the academic schedules provided by the schools to enter in this data with the permission of the participants.

Once the booklets were collected, the researcher calculated the mean percentage grade for each learner and entered it into the appropriate place on the academic performance table (Appendix 5).

3.8 RESEARCH ETHICS

Ethical guidelines as specified by the American Psychological Association (2010) were adhered to during all stages of this research study.

The principals of the schools received a letter containing detailed information about the research objectives, procedures and expectations (Appendix 2). The researcher met with each principal and obtained permission before research was conducted. Informed consent was obtained from the parents or legal guardians of the minor participants. The purpose, duration and expectations of the research process were explained to each participant in detail by the researcher. There was no coercion used to enlist participant assistance and participants were assured that their involvement was purely voluntary. It was emphasised that they were free to withdraw at any given point in time if they felt uncomfortable or anxious.

All parents or guardians of the learners that were under the age of 18 and that participated in the study were required to sign a consent form (Appendix 3). Only

learners that had both parental consent and learner assent were permitted to participate in the research. Necessary precautions were taken to keep information about individual learners confidential. The participants were asked to fill out the research questionnaire book anonymously. All personal details of the participants were handled confidentially (no-one else than the researcher saw this information) and were used exclusively in this study. The researcher also informed the participants that if at any time during the survey, participants felt uncomfortable with answering a question, they could leave it out and proceed to the next. A cover letter was also included in the research booklet explaining the purpose of the intended study, emphasizing the confidentiality of the participant information and the right or freedom to withdraw at any time (Appendix 5).

The testing and research procedure was carried out in such a way that the welfare of the participants was always the researcher's highest priority. This research did not involve any risks to the physical, emotional and psychological safety of the participants. The completed tests and test scores will be kept in a private and securely locked location for six months (March 2017) after the research was completed. When this time has expired, all completed tests and test scores will be incinerated

3.9 DATA ANALYSIS

The collected data was entered into and analysed with the SPSS 23.0 program (SPSS, 2015). Exploratory factor analyses and Cronbach alpha coefficients were used to assess the validity and reliability of the measuring instruments used in this study (Clark & Watson, 1995). Descriptive statistics including means, standard deviations, skewness and kurtosis were used to describe the central tendency and symmetry of the data. Descriptive data analysis describes data by investigating how scores are distributed on each variable and then it determines whether, by comparing distributions, the scores on the different variables are related to each other in any way (Blanche et al., 2006).

The levels of life satisfaction were analysed and assessed by adapting the Satisfaction with Life Scale boundaries (Diener et al., 1985). They are outlined in the table below.

Table 3.2 Life satisfaction scoring (MSLSS)

Score/6	Score/240	Rating
0 – 1	40 – 79	Extremely dissatisfied
1 – 2	80 – 119	Dissatisfied
3 - 4	120 – 159	Average Score
4 – 5	160 – 199	Satisfied
5 – 6	200 – 240	High, very satisfied

The table below shows how learner engagement was assessed by adapting score ratings from the (UWES) Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003).

Table 3.3 Learner engagement scoring (WES)

Percentile	Rating
< 95 th	High
< 75 th	Average
< 25 th	Low
< 5 th	Very low

Academic performance was analysed and assessed using the scale based on the percentage system of grade allocation as indicated in the table below.

Table 3.4 Academic performance rating scale

Percentage	Grade	Rating
90 - 100	A*	Excellent
80 - 89	A	Very good
70 - 79	B	Good
60 -69	C	Above average
50 - 59	D	Average
40 - 49	E	Below average
30 - 39	F	Poor
0 - 29	G	Weak

The Pearson product-moment coefficient of correlation was used to explore the strength and direction of the relationships between adolescent life satisfaction, learner engagement and academic performance. In terms of statistical significance, the value was set at 99% confidence level ($p \leq 0.01$). Independent sample t-tests were used to establish gender differences in adolescent life satisfaction, learner engagement and academic performance. Analysis of variance (ANOVA) was used to compare age and grade differences in levels of adolescent life satisfaction, learner engagement and academic performance. Multiple regression analysis was used to determine and predict the relationship of life satisfaction and engagement on academic performance (Coolican, 2009).

3.10 SUMMARY OF METHODOLOGY

This chapter discussed the research methodology of this study. The aims, objectives and hypothesis are essential as they direct the research process. The chapter outlined the research design, including the framework that will provide valid answers to the research questions. The population group was defined and the sampling process that generated a representative sample explained. Details of the formal research instruments were given by including the rationale, description, administration, scoring, reliability, validity and motivation for each instrument. The more researcher-designed components of the research questionnaire booklet, namely the biographical questionnaire and the academic performance table, were also explained. The data collection process was documented describing the steps the researcher followed in

order to get the information. This chapter also includes the ethical guidelines that were followed to ensure that the research was fair, the well-being of participants preserved and the integrity of the field maintained. Lastly, this chapter described the procedures that were followed to analyse the data for this study.

CHAPTER 4

4 RESULTS AND DISCUSSION

4.1 INTRODUCTION

This section is a presentation and discussion of the results obtained in this study. All the quantitative data that was collected, was entered into, scored and interpreted using the SPSS 23.0 (SPSS, 2015) statistical programme. The programme is designed for social research and provides a wide range of statistical options (Blanche et al., 2006). The results are then reported and subsequently discussed.

Firstly, the biographical data was organised and tabulated. This gives the researcher an overall characteristic summary of the research population. The next part involved the descriptive statistics. These statistics helped the researcher to describe the sample characteristics, identify underlying patterns or trends in the data and to assess whether the data was normally distributed. These included evaluating the central tendency of the data, using the means, standard deviation and distribution, in terms of skewness and kurtosis. Internal consistency measured reliability of the MSLSS and WES scales through an estimate known as the Cronbach alpha coefficient. Inferential statistics such as Pearson's correlation coefficients, t-tests and ANOVA's were used to determine the strength and direction of relationships among variables. Pearson's product-moment correlations were used to determine the strength and direction of the relationships between adolescent life satisfaction, learner engagement and academic performance. T-tests were used to determine if there were practical significant gender differences in

adolescent life satisfaction, learner engagement and academic performance. Analysis of variances (ANOVAs) were used to determine whether there were significant age and grade differences in levels of adolescent life satisfaction, learner engagement and academic performance. Finally, multiple regression analysis was being used to determine and predict the relationship of life satisfaction and engagement on academic performance.

As previously discussed, the first aim of this study is to determine the levels of life satisfaction among adolescents in selected public secondary schools in Windhoek, Namibia, using the MSLSS. The second aim of this study is to investigate the levels of learner engagement among adolescents in selected public secondary schools in Windhoek, Namibia using the WES. The third aim was to determine the average academic performance scores among adolescents in selected public secondary schools in Windhoek, Namibia. The fourth aim was to determine if life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia were related in any way and if so, how. The fifth aim of this study was to establish whether age, gender and grade differences influence life satisfaction, learner engagement and academic performance among adolescents in selected public secondary schools in Windhoek, Namibia.

The data collected was then analysed according to these five aims and objectives of the study. The results were then discussed and related back to the aims and objectives.

4.2 BIOGRAPHICAL DATA

Table 4.1 Biographical characteristics of learners in sample population (n = 540)

Item	Category	Frequency	Percentage (%)
Gender	Male	270	50
	Female	270	50
Age	14-15	145	26.9
	16-17	301	55.7
	18-19	89	16.5
	20-21	5	0.9
Repeated a grade	Yes	188	34.8
	No	352	65.2
Grade	9	180	33.3
	10	180	33.3
	11	180	33.3

Table 4.1 shows the frequency distribution for the learners in this sample across gender, age, grade level and repetition of a grade in the past.

There were 540 learners that completed the questionnaire booklet. As stated in the methodology section, equal numbers of male and female participants were included in this study. This means that there were 270 males and 270 females. The sample of 540 learners was equally spread along grades 9, 10 and 11 so there were 180 learners in each grade. In terms of age, the majority of the participants were 16 and 17 years of age, making up 55.7% of the population. 26.9% were 14 to 15 years of age, 16.5% were 18 to 19 years of age and 0.9% were 20 to 21 years of age. There were 34.8% of the learners in this study had repeated at least one grade in their school career thus far.

4.3 DESCRIPTIVE STATISTICS

Table 4.2 Descriptive Statistics for MSLSS, WES and academic performance

Item	Min. Score	Max. Score	Range	Mean	Standard Deviation	A	Skewness	Kurtosis
MSLSS	91	233	142	184.61	24.27	0.77	-0.58	0.081
WES	13	88	75	57.63	13.66	0.88	-0.24	-0.30
Academic Performance	19	84	65	52.84	11.28		0.13	-0.41

In Table 4.2 the descriptive statistics of the life satisfaction (MSLSS), learner engagement (WES) and academic performance are reported in terms of means, standard deviations, Cronbach alpha coefficients, skewness and kurtosis.

Table 4.3 Descriptive statistics for the instruments and subscales

Item		Minimum Score	Maximum Score	Range	Mean	Standard Deviation
MSLSS	Total	2.275	5.825	3.55	4.62	0.61
	Family	1	6	5	4.56	1.06
	Friends	1.889	5.778	3.889	3.98	0.58
	School	2	6	4	4.04	0.59
	Living environment	1.444	6	4.556	3.95	0.72
	Self	1.286	6	4.714	5.10	0.75
WES	Total	1	6.769	5.769	4.43	1.05
	Cognitive	1	6.8	5.8	4.05	1.10
	Emotional	1	7	6	4.68	1.31
	Physical	1	7	6	4.52	1.36

In Table 4.3 the mean values of the life satisfaction (MSLSS) and learner engagement (WES) instrument's total and subscale scores are listed.

In terms of reliability, both MSLSS and the WES had acceptable internal consistencies. Both scales had acceptable degrees to which each item in the scale measured the same construct. They had values above the cut-off point of 0.70 (Bryman & Bell, 2007). The MSLSS was $\alpha = 0.77$ and the WES was $\alpha = 0.88$. The highest cluster of scores around the mean was found in academic performance ($SD = 11.28$) and the lowest cluster of scores around the mean was found in the MSLSS ($SD = 24.27$).

With regards to central tendency, the results show that these adolescents have relatively high life satisfaction and engagement scores. The total life satisfaction mean score on the MSLSS was 184.61 out of a possible 240 ($SD = 24.27$). The participants rated each item on the scale from one to six. This means when converted to a score out of six, the average response for every question was 4.62. This puts the total life satisfaction score in the 77th percentile range. Based on the rating scale used for this research, this score is indicative of satisfied life satisfaction levels amongst the adolescents in these selected public secondary schools. In the first hypothesis, it was indicated that adolescents in selected public secondary schools in Namibia have satisfied levels of life satisfaction. The average MSLSS score confirms that life satisfaction levels are classified as satisfied amongst this population. The first hypothesis is accepted.

The mean score on the WES was 57.63 out of a possible 91. The participants rated each item in the scale using a 7-point Likert scale. The average response rate for each question was 4.43 out of a possible seven. This puts the total engagement score in the 63rd percentile range. Based on the rating scale used for this research, this score is indicative of average engagement scores amongst this adolescent population. The second hypothesis stated that adolescents in selected public secondary schools in Namibia have below average levels of learner engagement. The mean WES scores do not support this and as a result, the second hypothesis is rejected.

Academic performance scores for this group of adolescents had a mean score of 52.84 (SD = 11.28). According to the academic performance rating, this mean score is classified as being average. The third hypothesis was that adolescents in selected public secondary schools in Namibia have below average academic performance levels. The third hypothesis is subsequently rejected.

The mean scores of each domain (subscale) in the MSLSS were converted to a score out of 6 to allow for comparisons as the different domains had different numbers of items. This number was chosen as participants were asked to rate each life satisfaction item out of 6. The domain with the highest mean scores was self (Mean = 5.10, SD = 0.75), followed by family (Mean = 4.56, SD = 1.06). The domain with the lowest mean score was living environment (Mean = 3.95, SD = 0.72) followed closely by friends (Mean = 3.98, SD = 0.58). The highest cluster of scores around the mean was found

in the friends' domain ($SD = 0.58$) followed closely by the school domain ($SD = 0.59$). The lowest cluster of scores around the mean was found in the family domain ($SD = 1.06$). The mean scores of each subscale of the WES were converted to a score out of 7 to allow for comparisons as the different subscales had different numbers of items. This number was chosen as each participant was asked to rate each engagement item out of 7. The highest mean score in the WES was found on the emotional engagement subscale (Mean = 4.68, $SD = 1.31$) and the lowest mean score was found on the cognitive engagement subscale (Mean = 4.05, $SD = 1.10$). The highest cluster of scores around the mean was found in cognitive engagement ($SD = 1.10$) and the lowest cluster of scores around the mean was found in physical engagement ($SD = 1.36$).

In terms of skewness, the MSLSS (-0.58) and WES (-0.24) values are negative, indicating that most of the participants scored high on these variables. Both values are more than -1.0 indicating the skewness is not substantial and there is a degree of symmetry. Specifically, the MSLSS skewness score is between -0.5 and -1. It is therefore moderately skewed and the WES skewness score is between -0.5 to 0.5. It is therefore approximately symmetric (Blanche et al., 2006). The skewness value for academic performance is positive (0.13), indicating that the majority of this sample scored lower on this variable. The value is less than 1.0 so the skewness is not considerable and there is a degree of symmetry. It is between -0.5 and 0.5, indicating the distribution is approximately symmetric. Both WES and academic performance variables have a kurtosis of less than 0 which indicates a distribution that is relatively flat with points dispersed along the X-axis (Pallant, 2013).

4.4 INFERENCE STATISTICS

Inferential statistics aim to describe and make inferences from the data about how the population may think or behave. It aims to report if any observed difference between groups within the research is a dependable one or one from which conclusions may be derived or one that simply happened by chance (Blanche et al., 2006).

4.4.1 Correlation (Pearson product-moment coefficient)

The strength and direction of the relationships between the continuous variables, MSLSS, WES and academic performance were determined using a correlation coefficient (Blanche et al., 2006).

Table 4.4 Pearson Correlations of the scale measurements

	MSLSS	WES	Academic Performance
MSLSS	1	-	-
WES	0.371 ^{***+}	1	-
Academic Performance	0.116 ^{**+}	0.394 ^{***+}	1

^{**}p ≤ 0.01 statistically significant (2-tailed)

⁺ r > 0.10 (practically significant, small effect)

⁺⁺ r > 0.30 (practically significant, medium effect)

Table 4.4 shows the correlations between the constructs life satisfaction (MSLSS), learner engagement (WES) and Academic Performance.

The relationships between these variables have been investigated using the Pearson product-moment correlation coefficient. In terms of statistical significance, the findings were all statistically significant at a 99% confidence interval level ($p \leq 0.01$). A low p-value of 0.01 is highly significant (Blanche et al., 2006; Bryman & Bell, 2007).

Cohen (1988) suggests the following guidelines for the size and practical significance of the correlation coefficient as being, practically significant and small effect ($0.10 \leq r \leq 0.29$), practically significant and medium effect ($0.30 \leq r \leq 0.49$) and practically significant and large effect ($0.50 \leq r \leq 1.0$). The correlations were noted as follows:

- MSLSS scores are statistically and practically significantly positively related to WES scores ($r = +0.371$, medium effect).
- WES scores are statistically and practically significantly positively related to academic performance ($r = +0.394$, medium effect).
- MSLSS scores are statistically and practically significantly positively related to academic performance ($r = +0.116$, small effect).

Table 4.5 Pearson Correlations between the three domains of WES and MSLSS and academic performance

	MSLSS	Academic Performance
WES Cognitive	0.312 ^{**++}	0.417 ^{**++}
WES Emotional	0.368 ^{**++}	0.424 ^{**++}
WES Physical	0.374 ^{**++}	0.287 ^{**++}

****p** ≤ 0.01 statistically significant (2-tailed)

+ r > 0.10 (practically significant, small effect)

++ r > 0.30 (Practically significant, medium effect)

Table 4.5 shows the correlations between the three (cognitive, emotional and physical) dimensions of learner engagement (WES) and life satisfaction (MSLSS) scores and academic performance.

The relationships between these variables have also been investigated using the Pearson product-moment correlation coefficient. In terms of statistical significance, the findings were all statistically significant at a 99% confidence interval level ($p \leq 0.01$).

The correlations were noted as follows:

- MSLSS scores are statistically and practically positively significantly related to all three domains of the WES. All three scores are practically significant, with a medium effect ($r > 0.30$).
- MSLSS scores correlate the strongest with physical engagement, but there is very little difference between the correlation coefficients of the three engagement domains and life satisfaction.
- WES scores for cognitive and emotional engagement are statistically and practically positively related to academic performance, cognitive engagement ($r = 0.417$, medium effect) and emotional engagement ($r = 0.424$, medium effect). Physical engagement is statistically and practically positively related to academic performance with a small effect ($r = 0.287$).

The Pearson correlation coefficient shows that the MSLSS score and the cognitive domain of the WES are significantly and practically positively related to one another ($r = 0.312$, medium effect). Significant and practical positive relationships were found between life satisfaction and emotional engagement ($r = 0.368$) and physical engagement ($r = 0.374$). The results show that of the three domains of engagement, cognitive engagement had the smallest correlation with life satisfaction.

In the fourth hypothesis, significant positive relationships between life satisfaction, learner engagement and academic performance among the adolescent population was predicted. The Pearson correlations of the scales show that MSLSS and WES are significantly and practically positively related to one another ($r = +.371$, medium effect). The Pearson correlations of the scales show that WES and academic performance are also significantly and practically positively related to one another ($r = +.394$, medium effect). As a result, the study indicated that when these adolescents in Windhoek experience higher levels of life satisfaction, they concurrently experience higher levels of engagement and subsequently experience higher levels of academic performance. The fourth hypothesis was accepted.

4.4.2 T-Tests

Independent sample t-tests were performed as an analysis of variance, testing the impact of the independent variable (gender) on the dependent variables (scores on the MSLSS, WES and academic performance).

Table 4.6 Independent sample T-tests for gender and life satisfaction, learner engagement and academic performance

Item	Gender	Mean	SD	t	Df	P	MD	95% CI	η^2	Cohen's d
MSLSS	Male	171.88	17.99	0.71	538	0.48	1.15	-2.04 to 4.33	0.0009	0.060938
	Female	170.73	19.66							
WES	Male	56.85	13.45	1.32	538	0.19	1.55	-3.86 to 0.76	0.003	0.113658
	Female	58.40	13.85							
Academic performance	Male	52.56	11.09	0.58	537	0.57	0.56	-2.47 to 1.35	0.0006	0.049607
	Female	53.12	11.48							

* $p \leq 0.05$ ** $p \leq 0.01$

Table 4.6 shows the results of an independent-samples t-test comparing life satisfaction (MSLSS), learner engagement (WES) and academic performance scores for males and females.

The Sig. value for the Levene's test for the MSLSS, WES and academic performance were 0.459, 0.982 and 0,284 consecutively. All three values calculated were larger than 0.05, so equal variance was assumed for further analysis.

The gender differences in the scores of the dependent variables were assessed using the value in Sig. (2-tailed) column value for p with equal variance. If $p \leq 0.05$, there is a significant difference in the mean scores of the dependent variables for male and female learners (Pallant, 2013). The values for the MSLSS ($p = 0.479$), WES ($p = 0.187$) and academic performance ($p = 0.565$) were all much larger than the 0.05 cut-off. As a result, there is no significant difference in the values of MSLSS, WES and academic performance between male and females in the population.

The Eta squared statistic (η^2) represents the proportion of variance that is in the MSLSS, WES and academic performance variables that can be explained by gender (Pallant, 2013).

It is calculated using the following formula:
$$\text{Eta squared } (\eta^2) = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

Cohen (1988) suggests the following guidelines for understanding and interpreting the eta squared value, small effect (0.01), moderate effect (0.06) and large effect (0.14). The effect sizes of the MSLSS (0.0009), WES (0.003) and academic performance (0.0006) were very small. As a percentage, only 0.09% (MSLSS), 0.3% (WES) and

0.06% (academic performance) of the variance in the scores can be explained by and attributed to by gender.

The results for the T-Tests are summarised as follows:

- Gender and adolescent life satisfaction

There was no significant difference in scores in life satisfaction for males ($M = 171.88$, $SD = 17.99$) and females ($M = 170.73$, $SD = 19.66$; $t(538) = 0.71$, $p = 0.48$, two-tailed). The magnitude of the differences in the means (mean difference = 1.15, 95% CI: -2.04 to 4.33) was very small (eta squared = 0.0009).

- Gender and learner engagement

There was no significant difference in scores for males ($M = 56.85$, $SD = 13.45$) and females ($M = 58.40$, $SD = 13.85$; $t(538) = -1.32$, $p = 0.19$, two-tailed) with learner engagement. The magnitude of the differences in the means (mean difference = -1.55, 95% CI: -3.86 to 0.76) was very small (eta squared = 0.003).

- Gender and academic performance

There was no significant difference in academic performance scores for males ($M = 52.56$, $SD = 11.09$) and females ($M = 53.12$, $SD = 11.48$; $t(537) = -0.58$, $p = 0.57$, two-tailed). The magnitude of the differences in the means (mean difference = -0.56, 95% CI: -2.47 to 1.35) was very small (eta squared = 0.0006).

Hypothesis 5 predicted that there is no significant relationship between gender and life satisfaction but that there is a significant relationship between gender and learner engagement and academic performance among adolescents in selected public schools in Windhoek, Namibia. The results from the T-tests show that only a very small and insignificant percentage of the results for the MSLSS, WES and academic performance can be attributed to gender. As a result, these statistics support the first part of the hypothesis that there is no significant relationship between gender and life satisfaction among these adolescents. The second part of the hypothesis is rejected because according to the results, there is also no relationship between gender and learner engagement and academic performance among these adolescents in selected public schools in Windhoek, Namibia. Hypothesis 5 is thus partially accepted.

4.4.3 One-way analysis of variance (ANOVA)

An Analysis of Variance (ANOVA) with alpha set at 0.05 tested if a relationship exists between grade levels and age and MSLSS, WES and academic performance scores. Pallant (2013) explains that an ANOVA indicates whether there are significant differences in the mean scores on the dependent variables (MSLSS, WES and academic performance) across the independent variables (grade and age). Post-hoc comparisons are used to find out where these differences lie.

4.4.3.1 Grades and MSLSS, WES and academic performance

Table 4.7 ANOVA between grade levels and MSLSS, WES and academic performance scores

	Source of variation	Sum of Squares	df	Mean Square	F	p
MSLSS	Between groups	284.537	2	142.269	0.400	0.670
	Within groups	190898.433	537	355.491		
	Total	191182.970	539			
WES	Between groups	1441.911	2	720.956	3.904*	0.021*
	Within groups	99172.272	537	184.678		
	Total	100614.183	539			
Academic Performance	Between groups	2450.516	2	1225.258	9.947**	0.000**
	Within groups	66020.441	536	123.172		
	Total	68470.957	538			

* $p \leq 0.05$ ** $p \leq 0.01$

Table 4.7 shows the ANOVA results for the relationship between grade levels and life satisfaction (MSLSS), learner engagement (WES) and academic performance scores.

The alpha values indicate there is no statistically significant difference ($p \geq 0.05$) between the grade levels and MSLSS: $F(2, 537) = 0.4$, $p = 0.670$. There is a statistically significant difference ($p \leq 0.05$) between grade levels and the mean scores of the WES: $F(2, 537) = 3.904$, $p = 0.021$. There is a statistically significant difference ($p \leq 0.01$) between grade levels and academic performance: $F(2, 536) = 9.947$, $p =$

0.000. The larger F values for the WES and academic performance indicate that there is more variability between the grade levels than within.

The effect sizes are as follows:

$$\text{MSLSS scores and grade level: Eta squared } (\eta^2) = \frac{284.537}{191182.970} = 0.001$$

$$\text{WES scores and grade level: Eta squared } (\eta^2) = \frac{1441.911}{100614.183} = 0.014$$

$$\text{Academic performance score and grade level: Eta squared } (\eta^2) = \frac{2450.516}{68470.957} = 0.036$$

Based on the proposed values of Cohen (1988), the effect size of the MSLSS (0.001), WES (0.014) and academic performance (0.036) were all small. Despite WES and academic performance scores reaching statistical significance, the actual mean scores between the grades is small. As a percentage, only 0.1% (MSLSS), 1.4% (WES) and 3.6% (academic performance) of the variance in the scores can be explained by grade level.

Post-hoc comparisons using the Turkey HSD test indicated:

- Mean academic performance scores for all the grades were significantly different.

- Mean WES scores were significantly different between all the grades except between grades 9 ($M = 58.58$, $SD = 14.26$) and 10 ($M = 58.97$, $SD = 13.02$).

Hypothesis 6 states that there is no significant relationship between grade differences and life satisfaction and academic performance but that there is a significant relationship between grade differences and learner engagement among adolescents in selected public schools in Windhoek, Namibia. The results from the ANOVA show that only a small percentage of the results from the MSLSS, WES and academic performance can be attributed to the grade that the learner is in. As a result, the statistics support the first part of the hypothesis in that there is no significant relationship between grade differences and life satisfaction and academic performance among these adolescents. The statistics also found no relationship between grade differences and learner engagement among these adolescents in selected public schools in Windhoek, Namibia. The second part of the hypothesis predicting a relationship between grade differences and learner engagement is therefore rejected. Hypothesis 6 is thus partially accepted.

4.4.3.2 Age and MSLSS, WES and academic performance

Table 4.8 ANOVA between age and MSLSS, WES and academic performance scores

	Source of variation	Sum of Squares	df	Mean Square	F	p-value
MSLSS	Between groups	1133.697	3	377.899	1.066	0.363
	Within groups	190049.274	536	354.570		
	Total	191182.970	539			
WES	Between groups	2823.540	3	941.180	5.159	0.002
	Within groups	97790.644	536	182.445		
	Total	100614.183	539			
Academic Performance	Between groups	9037.451	3	3012.484	27.117	0.000
	Within groups	59433.507	535	111.091		
	Total	68470.957	538			

Table 4.8 shows the ANOVA results for the relationships between age and life satisfaction (MSLSS), learner engagement (WES) and academic performance scores.

There was no statistical significant difference between age and MSLSS scores: $F(3, 536) = 1.066$, $p = 0.363$. There is a statistical significant difference between age and WES scores: $F(3, 536) = 5.159$, $p = 0.002$ and age and academic performance: $F(3, 535) = 27.117$, $p = 0.000$.

The effect sizes are as follows:

$$\text{MSLSS scores and age level: Eta squared } (\eta^2) = \frac{1133.697}{191182.970} = 0.006$$

$$\text{WES scores and age level: Eta squared } (\eta^2) = \frac{2823.540}{100614.183} = 0.028$$

$$\text{Academic performance score and age level: Eta squared } (\eta^2) = \frac{9037.451}{68470.957} = 0.132$$

Based on the proposed eta value guidelines of Cohen (1988), the MSLSS (0.006) and the WES (0.028) were classified as small effects. The effect size of academic performance (0.132) was large. As a percentage, 0.6% (MSLSS), 2.8% (WES) and 13.2% (academic performance) of the variance in the scores can be explained by the learners' ages.

The descriptive statistics show that academic performance decreased with age with these learners by comparison of the means at each age group. The age groups 14 – 15 (M = 58.77), 16 – 17 (M = 51.86), 18 – 19 (M = 47.11) and 20 – 21 (40.40) show progressive decline in the means as the average age increases.

Post-hoc comparisons using the Turkey HSD test indicated that:

- Mean academic performance scores were significantly different for all the ages except between the groups of 18 – 19 (M = 47.11, SD = 9.968) and 20 – 21 (M = 40.40, SD = 7.635) years of age.

- Mean WES scores were significantly different for all ages except between the groups 14 -15 (M = 59.49, SD = 13.98) and 16 – 17 (M = 57.96, SD = 13.28) years of age.

Hypothesis 7 states that there is no significant relationship between age differences and life satisfaction and academic performance but there is a significant relationship between age differences and learner engagement among adolescents in selected public schools in Windhoek, Namibia. The results from the ANOVA show that a small percentage of the results for the MSLSS and WES can be attributed to the age of the learner. This means the statistics find no significant relationship between age differences and life satisfaction and learner engagement. The results do indicate however that age differences possibly account for a large percentage of the variation seen in academic performance, with average academic performance decreasing with an increase in the learners' age. This means the statistics found a significant relationship between age differences and academic performance for this group of adolescents in selected public schools in Windhoek, Namibia. Hypothesis 7 is partially accepted.

4.4.4 Multiple Regression Analysis

A multiple regression analysis predicts scores on the dependent variable from the scores on the independent variable (Blanche et al., 2006). Multiple regression analyses

were used to predict the relationship between the life satisfaction, learner engagement and academic performance variables.

Table 4.9 Multiple regression analysis with academic performance as the dependent variable and the MSLSS and WES scores as the independent variables

Variable	Unstandardized Coefficients		Standardised Coefficients	t	p	F	R ²
	B	SE	B				
(Constant)	37.085	4.113		9.016		49.524**	0.156
MSLSS	-0.21	0.026	-0.35	0.817	0.414		
WES	0.336	0.035	0.407**	9.513	0.000**		

* $p \leq 0.05$ ** $p \leq 0.01$

Table 4.9 shows a multiple regression analysis explaining the effect of life satisfaction and learner engagement as independent variables on academic performance, the dependent variable.

The R² value explains that these two constructs, being life satisfaction and engagement explain for 16% of the variance in academic performance. (F= 49.524, $p \leq 0.01$). The regression coefficient of the WES ($\beta = 0.407$, $p \leq 0.01$), was statistically significant.

Table 4.10 Multiple regression analysis with WES as the dependent variable and MSLSS as the independent variable

Variable	Unstandardized Coefficients		Standardised Coefficients	t	p	F	R ²
	B	SE	B				
(Constant)	11.572	5.006		2.312		85.652**	0.137
MSLSS	0.269	0.029	0.371**	9.255	0.000**		

* $p \leq 0.05$ ** $p \leq 0.01$

Table 4.10 shows a multiple regression analysis explaining the effect of life satisfaction (MSLSS) scores as the independent variable on the learner engagement (WES) scores, the dependent variable.

The R² value indicates that life satisfaction accounts for 14% of the variance in the WES. (F= 85.652, $p \leq 0.01$). The regression coefficient of the MSLSS ($\beta = 0.371$, $p \leq 0.01$), was statistically significant.

Hypothesis 8 states that there are significant and predictive interchangeable relationships between the constructs of adolescent life satisfaction, learner engagement and academic performance. Multiple regression analyses proved that this is not entirely true or false. According to the data collected life satisfaction is a significant predictor of learner engagement and learner engagement is a significant predictor of academic performance. There was no significant predictive relationship directly between life satisfaction and academic performance.

4.5 DISCUSSION

The results are now collated and discussed so that necessary conclusions and recommendations founded in literature can be made. The objective of this study was to measure the levels of and relationships between life satisfaction, engagement and academic performance in adolescents in selected public secondary schools in Windhoek. The findings suggest a significant positive predictive relationship between these adolescents' life satisfaction levels and their levels of engagement. They also suggest a smaller significant positive predictive relationship between adolescents' level of engagement and their academic performance.

In terms of reliability, both instruments namely the MSLSS and the WES had acceptable internal consistencies to be used in this research. This means that the degrees to which each item in each scale measured the same construct was satisfactory. Bryman & Bell (2007) explain that acceptable internal consistencies must be above 0.7. The MSLSS was $\alpha = 0.77$ and the WES was $\alpha = 0.88$.

The population sample consists of 540 adolescents from nine different public secondary schools in Windhoek. Equal numbers of 270 males and 270 females make up the sample. Learners were also equally selected from grades 9, 10 and 11, with 180 learners from each grade making up the sample. The majority of the population were between the ages of 16 and 17 years old and comprised of 55.7% of the population. Just over one-third (34.8%) of the learners that participated in the research had repeated at least one grade thus far. This percentage is quite alarming. High repetition

rates like these are affiliated with low engagement levels (Fredricks et al., 2004). The repetition rates closely relate to the Namibian statistics mentioned in the literature review, with repetition rates of 30% in grade 8 and 22% in grade 9 (EMIS, 2012). The concern about failure and retention is that it can increase dropout rates in students and learners (Fredrickson, 2004).

The study of means and central tendencies within the descriptive statistics suggest that these adolescents had relatively high life satisfaction and engagement scores. The total multidimensional student life satisfaction mean score was 184.61 out of a total 240. The average score was converted to a representative value out of 6 for comparative importance (this is because the scale asked learners to rate each life satisfaction item out of 6). As a result, the average score for each item on this scale was 4.62 out of 6. Based on a life satisfaction scoring scale that was adapted for this research, the mean score for this group of adolescents is representative of satisfied life satisfaction levels. Studies of 43 nations found that 86% of people had happiness levels that were positive and above neutral. These adolescents' life satisfaction scores coincide with this statistic (Diener & Diener, 1996). On a scale of 1 to 10, the mean average across 43 nations was 6.33. (Proctor et al., 2009). Life satisfaction and subjective well-being levels of this adolescent population are thus equivalent to the world average in that they are also positive and above neutral.

The adolescents' mean total engagement score was 57.63 out of a possible 91. This value was then converted to a relative one out of 7 (because learners rated their engagement levels on a 7-point Likert scale). This means that the average response rate for each question was 4.43 out of a possible 7. This puts the total engagement of this group of adolescents in the 63rd percentile range. Based on the rating scale, this engagement score is indicative of average engagement levels amongst this adolescent population.

The mean academic performance scores for these secondary school learners was 53% which is an average score according to the academic performance rating scale. It is also 13% above the required pass rate which is 40%. This is quite high when one considers the fairly large percentage of this group that have repeated grades in the past. Academic performance scores had a wide range of 65, with a minimum score of 19 and a maximum score of 84. This indicates that the average grade may be a misleading summary of the overall ability of all the learners that participated in this study. This is because learners of all ability ranges participated in this research and an average performance score incorrectly indicates that the majority of these learners are attaining passing grades of achievement. The high repetition rates are also indicative of the possibility that the average academic performance score may be misleading.

The mean scores across the five subscales of the MSLSS were compared to assess which domains contribute the most or the least to the mean total life satisfaction score

for these adolescents. The domains with the highest mean scores are self and family. According to Huebner (2001), the family domain includes items that assess how these learners perceive relationships with their parents, how they rate and compare their family dynamics with others and the value they attribute to parental involvement. The self domain is their perception of themselves in terms of appearance, likeability and achievements. The domain with the lowest mean score was living environment and followed closely by friends. These aspects contributed on average the least to total life satisfaction scores. Huebner (2001) listed the items relating to the living environment domain in which adolescents rate how they feel about their home, neighbourhood and town. The friend subscale ratings are characterised by how they feel about the quality of their friendships.

The highest rating of engagement of the learners was on the emotional engagement subscale and the lowest was found on the cognitive engagement subscale. Emotional engagement is characterised by feelings of dedication and commitment to learning (Lewis et al., 2011; Schaufeli et al., 2002b). Cognitive engagement includes positive thoughts and processes that contribute to learning and the motivation to grasp new skills (Fredericks et al., 2004). Lippman and Rivers (2008) mentioned the significance of assessing engagement across all three domains, firstly to identify which learners are indeed disengaged and secondly by providing specific information about the engagement domains which may need attention when adapting teaching strategies or developing intervention programs.

Using the Pearson product-moment correlation coefficient, statistically significant correlations were made. MSLSS scores are statistically and practically significantly positively related to WES scores ($r > 0.30$, medium effect). There is a significant, positive and moderate relationship between life satisfaction and engagement among these adolescents. WES scores are statistically and practically significantly positively related to academic performance with ($r > 0.30$, medium effect). There is a significant positive and moderate relationship between engagement and academic performance among these adolescents. MSLSS scores are statistically and practically significantly positively related to academic performance ($r > 0.10$, small effect). There is a significant but very small relationship between life satisfaction and academic performance among these adolescents ($r > 0.10$, small effect).

Gender differences in life satisfaction, engagement and academic performance scores were assessed using independent sample t-tests. These tests were performed in order to find an analysis of variance by testing the effect of the independent variable (gender) on the dependent variables namely the MSLSS, WES and academic performance scores. The values for the MSLSS ($p = 0.479$), WES ($p = 0.187$) and academic performance ($p = 0.565$) were all much larger than the $p \leq 0.05$ cut-off. The Eta squared statistic (η^2) represents the proportion of variance in the MSLSS, WES and academic scores that can be attributed to gender. The effect sizes of all the scores were small, the MSLSS was 0.000, the WES was 0.003 and academic performance was 0.0006. This also means that only 0.09% of the MSLSS, 0.3% of the WES and 0.06% of the variance in academic performance scores can be explained by and attributed to gender.

These statistical tests conclude that there is no significant difference in the values of MSLSS, WES and academic performance between male and females of this adolescent population. This corresponds to existing research about the relationship between life satisfaction and gender. Huebner et al., (2000a) and Diener and Ryan (2000) suggested that life satisfaction is not related to gender. Savahl et al. (2015) also observed no significant differences across gender for any of the subscales. Proctor et al., (2009a) also noted the weak relationship of gender with life satisfaction levels. It does not however correspond with existing research on the relationship between gender and engagement and academic performance. There seems to be a definite relationship between gender and engagement and academic performance (Lietaert et al., 2015). Research shows that male learners have higher dropout rates, lower engagement levels and performed poorer academically than female learners (Lam et al., 2012; Lietaert et al., 2015; Wang & Eccles, 20012).

An Analysis of Variance (ANOVA) with alpha set at 0.05 established whether MSLSS, WES and academic performance scores are influenced by grade and age differences. There is no statistically significant difference ($F = 0.4, p \geq 0.05$) between grade and MSLSS scores. Huebner et al. (2000a) also concluded that life satisfaction is not related to grade levels in school. There is a statistically significant difference ($F = 3.904, p \leq 0.05$) between grade levels and WES scores. There is a statistically significant difference ($F = 9.947, p \leq 0.01$) between grade levels and academic performance. The effect sizes of all the scales were small, viz. the MSLSS is 0.001, WES is 0.014 and academic performance is 0.036. This means that despite the WES

and academic performance scores reaching statistical significance, the actual variance that can be attributed to grade level is very small. Only 0.1% of the MSLSS, 1.4% of the WES and 3.6% of academic performance of the variance in the scores can be explained by grade level. This conflicts with existing research about learner engagement that indicates a decline in engagement as one progresses through high school (Marks, 2000; Klem & Connell, 2004; Wang & Eccles, 2012). There is limited research showing any relationship between grade level and academic performance.

There is no statistically significant difference ($F = 1.066, p \geq 0.05$) between age and MSLSS scores. Proctor et al., (2009a) concluded that age contributes modestly to predicting adolescent life satisfaction. There is a statistically significant difference ($F = 5.159, p \leq 0.05$) between age and WES scores. There is a statistically significant difference ($F = 27.117, p \leq 0.01$) between age and academic performance. The effect sizes for the MSLSS (0.006) and the WES (0.028) are small. This means that despite the WES scores reaching statistical significance, the actual variance that can be attributed to age is very small. This contradicts existing research. Previous research implies that learner engagement in adolescents decreases as they get older (Klem & Connell, 2004; Marks, 2000; Wang & Eccles, 2012) and may be attributed to the developmental changes (Christenson et al., 2008). The effect size of academic performance, however, is 0.132 which is large. As a percentage, the variance in the scores explained by the learners' ages are 0.6% of MSLSS, 2.8% of WES and 13.2% of academic performance. Descriptive statistics indicate a negative relationship, in that the academic performance scores steadily decreased with age when comparing the

score means at each age group. The age group mean academic performance values are as follows, 14 – 15 years ($M = 58.77$), 16 – 17 years ($M = 51.86$), 18 – 19 years ($M = 47.11$) and 20 – 21 years ($M = 40.40$). This means that in this adolescent population, as age increased, academic performance decreased. This could be attributed to a wide range of factors such as loss of interest, work becoming progressively more challenging, a lack of good teachers in more advanced grades and loss of engagement.

Life satisfaction and learner engagement scores for this group of adolescents do not show any variation relating to grade, age and gender differences. As a result, other factors are more likely playing a role in life satisfaction and engagement levels.

Multiple regression analyses were used to predict how the constructs affected one another. The first multiple regression analysis explained the effect of life satisfaction and learner engagement (independent variables) on academic performance (dependent variable) for this population. The R^2 value explains that these two constructs, life satisfaction and engagement, predict 16% of the variance in academic performance ($F = 49.524$, $p \leq 0.01$) but only the regression coefficient of engagement ($\beta = 0.407$, $p \leq 0.01$) was statistically significant. Statistical significant difference was set at the $p < 0.05$ level. A regression equation found MSLSS ($F(2, 536) = 49.524$, $p = 0.414$), WES ($F(2, 536) = 49.524$, $p = 0.00$) with an R^2 of 0.156. As a result, only engagement levels were significant predictors of academic performance.

This substantiates the relationship explained by Salanova et al., (2010), that a learner's future academic achievements is best predicted by their previous performance and level of engagement. This study validates the value of engagement as it predicts academic performance in this group of adolescents. As a result, it may potentially be a valuable construct for developing education directives in Namibia.

The next multiple regression analysis explained the effect of life satisfaction (independent variable) on learner engagement (dependent variable). The R^2 value predicts that life satisfaction accounts for 14% of the variance in engagement ($F=85.652$, $p \leq 0.01$). The regression coefficient of life satisfaction ($\beta = 0.371$, $p \leq 0.01$), was statistically significant. A multiple linear regression was calculated to predict academic WES scores based on MSLSS levels. Statistical significant difference was set at the $p < 0.05$ level. A regression equation found MSLSS ($F(1, 538) = 85.652$, $p = 0.00$), with an R^2 of 0.137. As a result, MSLSS scores were significant predictors of WES scores.

The relationship between life satisfaction, engagement and academic performance seems to validate the Fredrickson's (2001) broaden-and-build theory. The experience of frequent life satisfaction results in the broadening of human thoughts and behaviours, leading to higher levels of engagement and subsequent improved academic performance. This expansion of cognition and engagement results in an accumulation of intellectual, psychological, physical and social resources which

ultimately improves functioning which is evident by better grades (Fredrickson, 2004; Lewis et al., 2011). These improved levels of engagement are invaluable because of their potential to reduce dropout rates, disengagement and the possibility of falling pregnant among adolescent girls (Fredricks et al., 2004).

The results of this research are consistent and supportive of previous research that find that higher levels of life satisfaction are related to higher levels of learner engagement which in turn improve academic performance in adolescents (Lyons & Huebner, 2014). Life satisfaction plays a central role in learners' ability to perform in school and thus relates to the aim of the study in that it supports the value of life satisfaction in influencing learner engagement and subsequently academic performance.

4.6 SUMMARY OF CHAPTER OF RESULTS AND DISCUSSION

In this chapter the empirical findings of this research are analysed, interpreted and discussed. The researcher explained the correlations and relationships between the various constructs. Firstly, the biographical data was tabulated in order to give insight into the population sample. Then the descriptive statistics were reported to understand the central tendency of the overall MSLSS, WES and academic performance data collected in terms of means, standard deviations skewness and kurtosis. The internal consistency of the MSLSS and WES were also described using reliability scales and the Cronbach alpha coefficient. The subscales of the MSLSS and WES were also

compared by converting their different means into a comparable value out of six and seven accordingly. Correlations using the Pearson product-moment were used to understand the relationship between MSLSS, WES and academic performance interchangeably. T-tests and ANOVAs were used to compare age, grade and gender differences in the MSLSS, WES and academic performance constructs. Multiple regression analysis was used to determine and predict the relationship of life satisfaction and engagement on academic performance.

CHAPTER 5

5 CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter includes the conclusions derived from this research based on the research objectives for this study. The limitations in the research design or methodology are examined because they may potentially influence the results and limit the conclusions. Lastly, the researcher included recommendations to solve the presenting research problem and direct future research.

5.1 CONCLUSION

The conclusions of this research investigating the relationship between life satisfaction, learner engagement and academic performance in adolescents in public secondary schools in Windhoek Namibia will be summarised based on the research objectives derived at the start of the research process.

The adolescent group that was investigated had high life satisfaction scores. According to the life satisfaction scoring, their level of life satisfaction is classified as being satisfied, with an average response rate of 4.62 out of 6 for each item. Total engagement scores averaged 184.61 out of a possible 240. This level of engagement falls within the 77th percentile and indicating that these individuals follow global trends of having positive life satisfaction scores.

The mean engagement score for this population of adolescents was 57.63 out of a possible 91. This average response rate for each question was 4.43 out of a possible 7. Engagement levels are in the 63rd percentile range and are classified as being just above average.

The average academic performance score was 53% among the learners. This score may, however, be misleading because the marks fall within a wide range, with many extremes. The high repetition rate also indicates that the mean academic performance score may not be a true reflection of the average learner's academic ability.

T-tests concluded that there is no significant difference in the values of life satisfaction, engagement and academic performance between male and females of this adolescent population. An Analysis of Variance (ANOVA) found a statistically significant difference between the current grade the learner is in and their engagement scores and academic performance. There is no such statistically significant difference between grade levels and life satisfaction scores. There is no statistically significant variation in life satisfaction that can be explained by the learner's age. There is a statistically significant difference between age and engagement scores within this sample. A statistically significant difference between the age of the individual and how they perform academically was obvious within this sample. The effect size of academic performance is 0.132, indicating that 13.2% of the variance in the academic performance scores can be explained by age.

Statistically significant correlations with a medium effect were found between life satisfaction and engagement and between engagement and academic performance. Only a statistically significant relationship, with a small effect was found between life satisfaction and academic performance among these adolescents. Multiple regression analyses indicated that engagement levels were significant predictors of academic performance. Life satisfaction levels did not, however, predict academic performance. Life satisfaction levels in this adolescent population were significant predictors of their engagement scores.

The results of this research are consistent with existing research. The results gathered from this adolescent group allow the researcher to make the following general conclusion that higher levels of life satisfaction are related to higher levels of learner engagement which in turn improve academic performance.

5.2 LIMITATIONS OF STUDY

Good scientific practice insists that all limitations of an investigation are clearly mentioned. The limitations of the study highlight the features of the design or methodology that may have negatively influenced the data collected or the interpretations of the findings from the research. As a result, these limitations have to be stated as they may offer restrictions to the conclusions and generalisations that can be made.

The first limitation is that the measurements of life satisfaction and learner engagement are based on self-report measures. This is not always the most reliable method of collecting data. The data that is collected may be subject to social desirability, common-method variance and defensive responses. Common-method variance is the amount of covariance that is attributable due to the similarity in the structure of the assessment tools, instead of the constructs they are meant to represent (Malhotra, Kim, & Patil, 2006). Social desirability describes the tendency for participants to answer questions in a manner that they believe will be regarded as favourable by others or pleasing to the researcher.

The use of ambiguous words and the level of English of the participants may hinder the effectiveness of measuring instruments. While both the MSLSS and the WES had low readability levels, English is spoken as the first language in only 3.4% of the Namibian households (Namibia 2011 Population and Housing Census Main Report, 2011). As a result, there is a risk that some words could be misunderstood.

No previous research could be found on the relationship between well-being, life satisfaction or engagement of Namibian adolescents. This means there is no Namibian frame of reference to direct objectives and refer to when discussing the results.

Due to time and financial restraints, only public schools in the Windhoek region, were included in this study. Nine public schools in Windhoek were approached to participate in the study. Even though there is a range of diversity within the schools that were selected (three lowest, average and highest performing schools in the Khomas region), the sample is not nationally representative. As a result, findings cannot be generalised to the broader Namibian secondary school community. Limiting the sample can fundamentally challenge statistical analysis because there is limited variability within the sample population.

Another limitation is that of the sampling. The random sample taken from each school was based on the first 10 boys and 10 girls in grades 9, 10 and 11 that agreed to participate but that also had parental consent. The risk is that the learners that were chosen may have specific characteristics that could result in a slightly more biased sample. In general, it could often be the more proactive and conscientious learner whose parents are involved in their academics that would submit the relevant documents needed to participate in the research. Typically, these characteristics are also related to learners that are more engaged. This could influence the results obtained by providing means that deviate from the actual values.

Cross-sectional studies collect and analyse data collected at one point in time. As a result, cross-sectional studies are limiting, mostly only allowing for the researcher to make conclusions about variation between the variables. This means that it is very

difficult to conclude relationships between cause and effect with absolute certainty (Bryman & Bell, 2007). There is also a risk that cross-sectional research is potentially strongly affected by mean population trends and that other variables that could potentially influence life satisfaction, learner engagement and academic performance in learners have been overlooked.

There may also be concerns that life satisfaction changes over time, especially as life satisfaction and engagement are assessed at different times to the academic performance level. Research shows internal consistency, cross-sectional and longitudinal correlations suggest one-year stability in adolescent life satisfaction reports, (Huebner, Funk & Gilman, 2000b; Suldo & Huebner, 2004) but the time frame may still be an area of concern affecting the research design.

The academic performance variable was generated by averaging the marks that each learner obtained in the April examination. The academic performance variable has a subjective quality to it in that the examinations were drafted and administered independently by each school. This could have a significant effect on the level of difficulty of examinations set in different schools. This has an effect on academic performance means and restricts comparisons because these examinations are not standardized. By averaging the marks each learner achieved in six subjects or more, the researcher aimed to reduce the risk that deviant outlier scores distort true academic

performance means. As a result, the academic performance variable is more reflective of each learner's level of achievement and commitment.

The learners that participated in the study comprised of different grade levels and also had different subjects. As a result, the academic performance level is not standardised or uniform. A more unified learner sample might have been more reflective, but it would have been very difficult practically to find a reflective sample with the same subjects from all of the school and grade levels that participated.

The academic performance level is obtained from using marks from only one examination session in the year. This limits the accuracy of this measurement and as a result it may be misleading as to the true ability of each learner. Learners' performance between examination sessions may vary.

5.3 RECOMMENDATIONS

As mentioned in the theoretical framework and the literature review, the Positive Psychology movement has seen extensive growth over the last 15 years. Research and empirical work relating to children and adolescents, however, is still limited. Fundamentally, there is still a lack of information about the value of these constructs (life satisfaction, engagement and academic performance) specifically to the Namibian

context. As a result, it is sensible not to over-interpret these findings with reference to practical implications as more extensive corroborative research is still necessary. The results should be a frame of reference for the development of similar future research initiatives.

5.3.1 Recommendations to solve the research problem

As discussed in earlier chapters, the Namibian education system has challenges relating to poor pass rates, worrying dropout statistics and disengaged learners. Finding initiatives that will improve education need to be explored.

The results from this study further confirms that engagement does positively influence academic performance in this group of Namibian adolescents. Levels of engagement are flexible and can be changed, thus validating the potential benefits of developing intervention programmes (Fredricks et al., 2004). Specific interventions can be directed towards improving engagement and specifically encouraging learners to finish school (Appleton et al., 2008; Furlong & Christenson, 2008). These intervention programmes can be incorporated into schools by possibly enhancing and supplementing the current life skills curriculum that is offered in all Namibian public schools.

Christenson et al. (2008) recommended that these programmes should include:

- strategies that help develop good relationships between teachers and learners.
- methods that encourage learner independence and autonomy by allowing learners to play an interactive role in their learning process. Learners should direct their academic journey by setting realistic goals and reflecting on them regularly.
- ways to help learners identify future career pathways. This helps them understand and validate the value of performing at school because they want to improve future educational prospects.
- ways to develop close relationships between teachers, school, families and the community. Collaboration is essential and ultimately they need to understand their role. A sense of support and belonging is essential for high engagement levels in learners.
- the development of programmes and extracurricular activities that also address the learners' non-academic interests.

Regular teacher professional development programmes should aim at increasing awareness of the importance of facilitating learner happiness and engagement. Christenson et al. (2008) emphasized how knowledgeable and empathetic teachers can enhance learner engagement. These can be regular sessions that take the form of a workshop biannually. Topics can include ways to improve relationships between teacher and learners, the importance of empathy, setting realistic but high expectations for learners and creating a safe, structured and conducive environment for learning.

With teenage pregnancy being the predominant reason for learners dropping out of school, directives that focus on empowering young women are becoming more of a priority.

5.3.2 Recommendations for future research

There is a need for studies that generate more representative samples of learners from all 14 regions of Namibia, ranging across a wider age range that investigates how life satisfaction, learner engagement and academic performance change over time. There are a number of different aspects that can potentially influence how these constructs behave such as urban vs rural, socioeconomic status and primary vs secondary school that need to be investigated. More extensive research in education such as these will provide the empirical work needed to plan, predict and justify future education initiatives.

A multi-method research instrument could be developed for engagement, giving a more comprehensive assessment of the variable so that it is not simply reduced to a self-report measure (Lyons & Huebner, 2014). Engagement can be assessed by looking at school attendance, classroom involvement, extracurricular participation and homework completion. In a similar way, national examination results can be used because these are standardised and implemented throughout the country. This will provide more consistency to this variable and allow for more reliable conclusions.

Research shows evidence that life satisfaction plays an important role in school engagement during the transition grades between primary and high school (Lewis et al., 2011). Every new section of schooling can profoundly alter the school experience as it is characterised by new challenges, expectations and relationships (Hanewald, 2013). A significant extension to this study would be to evaluate life satisfaction levels and its relationship with engagement during the different stages of schooling, namely primary, junior secondary and senior secondary levels. This, too, will help future interventions that specifically target the needs of each section.

Some adolescents are more prone to underperformance, apathy, lack of interest and self-confidence concerns than others (Zarrett & Eccles, 2006). In addition, low levels of life satisfaction in adolescence usually exist concurrently with other mental health issues (Goldbeck, et al, 2007). The life satisfaction and engagement scales can be used as valuable constructs in education by providing a more comprehensive assessment of each learner. These can help educators identify the groups of adolescents that are more at risk of depression, academic failure and dropout. These learners can be referred to attend engagement intervention programmes.

The literature review and results ascertain that Namibia has alarmingly high repetition rates. Specifically for the Namibian context, it would be valuable to investigate how repetition influences life satisfaction and learner engagement in successive years of schooling.

A longitudinal study is recommended in the future to clarify the predictive relationship between life satisfaction, learner engagement and academic performance more clearly and to eliminate potential cross-sectional design bias.

5.4 SUMMARY OF CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter concludes the research by reviewing the research objectives and associated findings. A concise conclusion was included explaining the results and significant relationships. The limitations of this study were discussed; for example, the cross-sectional research design, instrument concerns, sample selection process and the fact that no similar research had yet been conducted in Namibia. The researcher then gave recommendations; firstly, ways to solve the research problem and lastly, how future research initiatives can be structured.

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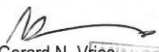
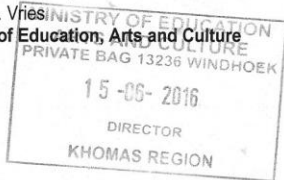
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APPENDICES

Appendix 1: Letters of approval from the Ministry of Education, Arts and Culture

(a): Permission from the Director

	
REPUBLIC OF NAMIBIA	
KHOMAS REGIONAL COUNCIL	
DIRECTORATE OF EDUCATION, ARTS AND CULTURE	
Tel: [09 264 61] 293 4356 Fax: [09 264 61] 231 367/248 251 Enquiries: Ms TL Shivute	Private Bag 13236 WINDHOEK
File No: 12/3/10/1	15 June 2016
<p>Ms Laura-Anne Rainey University of Namibia Private Bag 13301 Windhoek</p>	
PERMISSION FOR RESEARCH IN SELECTED SECONDARY SCHOOLS IN WINDHOEK	
<p>Permission is hereby granted to you to do research for your Masters of Arts (Clinical Psychology) in the public schools of your choice about "the relationship between life satisfaction, learner engagement and academic performance in adolescents in Khomas Region with the following conditions attached to:</p>	
<ul style="list-style-type: none">❖ The Principal of schools to be visited must be contacted before the visit and agreement should be reached between you and the principal.❖ The school programme should not be interrupted.❖ Teachers who will take part in this exercise will do so voluntarily.❖ Permission must be sought from Parents/Guardians of learners who will take part.❖ Khomas Education Directorate should be given a copy of your thesis.	
<p>Wish you the best in your study.</p>	
<p>Yours sincerely</p>	
<p> Gerard N. Vries Director of Education, Arts and Culture</p>	
	

(b): Permission from the Permanent Secretary



REPUBLIC OF NAMIBIA

MINISTRY OF EDUCATION, ARTS AND CULTURE

Tel: +264 61 -2933200
Fax: +264 61- 2933922
Enquiries: C. Muchila
Email: Cavin.Muchila@moe.gov.na

Luther Street, Govt. Office Park
Private Bag 13186
Windhoek
Namibia

File no: 11/1/1

Ms Laura-Anne Rainey
University of Namibia
P/Bag 13301
Windhoek
Cell: +264812771680
Email: laura.anne.rainey@gmail.com

Dear Ms Rainey

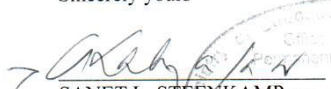

SUBJECT: PERMISSION TO CONDUCT RESEARCH IN KHOMAS REGION

Kindly be informed that permission to conduct research for your Master's Degree in Khomas region is herewith granted. You are further requested to present the letter of approval to the Regional Director to ensure that research ethics are adhered to and disruption of curriculum delivery is avoided.

Furthermore, we humbly request you to share your research findings with the ministry. You may contact Mr C. Muchila at the Directorate: Programmes and Quality Assurance (PQA) for provision of summary of your research findings.

I wish you the best in conducting your research and I look forward to hearing from you soon.

Sincerely yours


SANET L. STEENKAMP
PERMANENT SECRETARY


28/4/16
Date

All official correspondences must be addressed to the Permanent Secretary

Appendix 2: Letter to the principals of the schools

The Principal

Name of school

Dear Sir/Madam

Re: Permission for research in certain Secondary Schools

I am a Master's Psychology student at the University of Namibia. The topic of my research is: The relationship between life satisfaction, learner engagement and academic performance in adolescents in selected secondary schools in Windhoek, Namibia. My supervisor is Dr. Manfred Janik (mjanik@unam.na).

As part of the research, I need Secondary school learners in grades 9, 10 and 11 to complete a questionnaire. I will need 60 learners from your school (20 in each grade). Equal numbers of male and female learners will be needed from each grade level. Any details will be kept confidential and learners will be able to maintain their anonymity throughout the process. Parents will also be asked to sign consent forms to authorise their approval.

The questionnaire involves four components:

- a) The Multidimensional Life Satisfaction Scale
- b) The Work Engagement Scale
- c) A section in which they rate their academic performance
- d) A biographical section

The study will help gain perspective into variables that influence academic achievement and as a result it could provide useful data in this regard. Adolescent research is limited in Namibia and I hope to contribute more to this frequently neglected demographic group. Your school can access the data I have collected and I will be willing to discuss the results with you. I have attached the permission letter I received from the Permanent Secretary of Education, Arts and Culture, Ms Sanet Steenkamp. I have also attached the permission letter I received from the Director of Education, Arts and Culture for the Khomas region, Mr G.N. Vries.

I hope that you will grant me permission to include your school in my research.

My contact details are as follows:

Email: laura.anne.rainey@gmail.com

Telephone number: 0812771680

I hope to hear from you soon.

Thank you in advance.

Yours sincerely

.....

Laura-Anne Rainey

Appendix 3: Parental consent form

Parental Consent to Participate in a Research Study University of Namibia

Researcher: Laura-Anne Rainey

Research Title: THE RELATIONSHIP BETWEEN LIFE SATISFACTION, LEARNER ENGAGEMENT AND ACADEMIC PERFORMANCE IN ADOLESCENTS IN SELECTED PUBLIC SECONDARY SCHOOLS IN WINDHOEK, NAMIBIA

Introduction

- Your child is being asked to participate in a research study investigating:
The relationship between life satisfaction, learner engagement and academic performance in adolescents in selected public secondary schools in Windhoek, Namibia
- S/he was selected as a possible participant because s/he meets the target population criteria of attending a public school and being in grade 9, 10 or 11.

Purpose of Study

- The purpose of the study is to investigate how life satisfaction, learner engagement and academic performance are related to one another.

Life satisfaction is regarded as an effective indicator of well-being, happiness and general functioning in positive psychology. Engaged people are enthusiastically dedicated to their work and academically engaged students display an intrinsic interest in learning. Global research indicates that students with high levels of life satisfaction and engagement can achieve better academic results.

This investigation is in accordance with recent attempts to improve and direct education policies. This study will investigate whether life satisfaction and engagement can positively influence academic achievement. If so, constructive recommendations can be made that can affect better national learner academic achievement. Research on Namibian adolescents is very limited and no prior studies could be found about life satisfaction and levels of academic engagement in Namibian adolescents.

- This research is in partial fulfillment of the requirements for my degree of Master of Arts (Clinical Psychology) at the University of Namibia.

Description of the Study Procedures

- If you decide to allow your child to participate in this study, s/he will be asked to complete a questionnaire. The questionnaire will involve the following components:
 - a) The Multidimensional Life Satisfaction Scale
These consist of 40 items which students will rate on a 6 point Likert scale, ranging from 1 (strongly agree) to 6 (strongly disagree).
 - b) The Work Engagement Scale
This consists of 13 items which students will rate on a 7 –point scale ranging from never to always.

- c) A section in which they rate their academic performance
They will be asked to bring a copy of their April 2016 school report.
- d) A biographical section
They will be asked to fill in their age, gender, grade and school.
- The questionnaire should take about 45 minutes to complete.

Confidentiality

- This study is anonymous and no information will be collected about your child’s identity.
- Any information collected will be kept confidential and students will be able to maintain their anonymity throughout the process.
- The records of this study will be kept strictly confidential.

Right to Refuse or Withdraw

- The decision to participate in this study is voluntary.
- Your child may withdraw from the study at any point during the process.

Right to Ask Questions

- You are welcome to ask any further questions about this research study.
- My contact details are as follows:
Laura-Anne Rainey laura.anne.rainey@gmail.com
- If you would like a summary of the overall results once the study is completed, I can email them to you.

Consent

- Your signature below indicates that you have decided to allow your child participate as a research participant for this study. If you so wish, I can give you a copy of the signed consent form.

Thank you so much for your time and consideration.

Yours sincerely

Laura-Anne Rainey

Parent/Guardian Name:	_____
Learner Name:	_____
Parent/Guardian Signature:	_____
Date:	_____

Appendix 4: Participant consent form

PARTICIPANT CONSENT FORM

University of Namibia

Researcher: Laura-Anne Rainey

Research Title: THE RELATIONSHIP BETWEEN LIFE SATISFACTION, STUDENT ENGAGEMENT AND ACADEMIC PERFORMANCE IN ADOLESCENTS IN SELECTED SCHOOLS IN THE KHOMAS REGION, NAMIBIA

Introduction

- You are being asked to participate in a research study investigating:
The relationship between life satisfaction, student engagement and academic performance in high school students in the Khomas region of Namibia

Purpose of Study

- The purpose of the study is to investigate how life satisfaction, student engagement and academic performance are related to one another.

Life satisfaction is regarded as an effective indicator of well-being, happiness and general functioning in positive psychology. Engaged people are enthusiastically dedicated to their work and students display an intrinsic interest in learning. Global research indicates that students with high levels of life satisfaction and engagement can achieve better academic results. This investigation is in accordance with recent attempts to improve and direct education policies. This study will investigate whether life satisfaction and engagement can positively influence academic achievement. If so, constructive recommendations can be made that can affect better national learner academic achievement. Research on Namibian adolescents is very limited and no prior studies could be found about life satisfaction and levels of engagement in Namibian adolescents.

Description of the Study Procedures

- If you agree to participate in this study, you will be asked to complete a questionnaire. The questionnaire will involve the following components:
 - a) The Multidimensional Life Satisfaction Scale
 - b) The Work Engagement Scale
 - c) A section in which they rate their academic performance
 - d) A biographical section
- The questionnaire should take about 30 minutes to complete.

Confidentiality

- This study is anonymous and no information will be collected about your identity.
- Any information collected will be kept confidential and you will be able to maintain your anonymity throughout the process.
- The records of this study will be kept strictly confidential.

Right to Refuse or Withdraw

- The decision to participate in this study is voluntary.
- You may withdraw from the study at any point during the process.

Consent

- Your signature below indicates that you have agreed to participate in this study.

<p>Participant's Signature: _____</p> <p>Date: _____</p>
--

Appendix 5: Questionnaire booklet

**THE RELATIONSHIP BETWEEN LIFE SATISFACTION, LEARNER
ENGAGEMENT AND ACADEMIC PERFORMANCE IN
ADOLESCENTS IN SELECTED PUBLIC SECONDARY SCHOOLS IN
WINDHOEK, NAMIBIA**

Research Booklet

Laura-Anne Rainey

Dear Participant

You have been asked to participate in a research study investigating the relationship between life satisfaction, learner engagement and academic performance in adolescents in selected public secondary schools in Windhoek, Namibia.

The purpose of the study is to investigate how life satisfaction, learner engagement and academic performance are related to one another. This investigation is in accordance with recent attempts to improve and direct education policies in Namibia. This study will investigate whether life satisfaction and engagement can positively influence academic achievement. If so, constructive recommendations can be made that can affect better national learner academic achievement. Research on Namibian adolescents is very limited and no prior studies could be found about life satisfaction and levels of engagement in Namibian adolescents.

Please complete the attached questionnaire. The questionnaire involves the following components:

- a) Biographical Questionnaire
- b) The Multidimensional Life Satisfaction Scale
- c) The Work Engagement Scale
- d) A section to indicate your academic performance

The questionnaire should take about 30 to 45 minutes to complete.

This study is anonymous and no information will be collected about your identity. Any information collected will be kept confidential and you will be able to maintain your anonymity throughout the process. The records of this study will be kept strictly confidential. Your decision to participate in this study is voluntary and you have the right to refuse or withdraw the decision to participate in this study at any time in the process.

Thank you for your cooperation.

Yours faithfully

A handwritten signature in black ink, appearing to read "Rainey", is positioned above a horizontal line. The signature is written in a cursive style with a large initial 'R'.

Laura-Anne Rainey

Section A Biographical Information

Please fill in the following relating to your particulars:

Age: _____

Gender: _____

Grade: _____

School: _____

Have you repeated any grades in the past? Yes/No _____

Section B Multidimensional Students' Life Satisfaction Scale (MSLSS)

I would like to know what thoughts about life you've had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Here are some questions that ask you to indicate your satisfaction with life. Circle the number (from 1 to 6) next to each statement that indicates the extent to which you agree or disagree with each statement. It is important to know what you REALLY think, so please answer the question the way you really feel, not how you think you should. This is NOT a test. There are NO right or wrong answers. Your answers will NOT affect your grades, and no one will be told your answers.

Circle **1** if you **STONGLY DISAGREE** with the sentence

Circle **2** if you **MODERATELY DISAGREE** with the sentence

Circle **3** if you **MILDLY DISAGREE** with the sentence

Circle **4** if you **MILDLY AGREE** with the sentence

Circle **5** if you **MODERATELY AGREE** with the sentence

Circle **6** if you **STRONGLY AGREE** with the sentence

1. My friends are nice to me	1	2	3	4	5	6
2. I am fun to be around	1	2	3	4	5	6
3. I feel bad at school	1	2	3	4	5	6
4. I have a bad time with my friends	1	2	3	4	5	6
5. There are lots of things I can do well	1	2	3	4	5	6
6. I learn a lot at school	1	2	3	4	5	6
7. I like spending time with my parents	1	2	3	4	5	6
8. My family is better than most	1	2	3	4	5	6
9. There are many things about school I don't like	1	2	3	4	5	6
10. I think I am good looking	1	2	3	4	5	6

11. My friends are great	1	2	3	4	5	6
12. My friends will help me if I need it	1	2	3	4	5	6
13. I wish I didn't have to go to school	1	2	3	4	5	6
14. I like myself	1	2	3	4	5	6
15. There are lots of fun things to do where I live	1	2	3	4	5	6
16. My friends treat me well	1	2	3	4	5	6
17. Most people like me	1	2	3	4	5	6
18. I enjoy being at home with my family	1	2	3	4	5	6
19. My family gets along well together	1	2	3	4	5	6

Circle **1** if you **STONGLY DISAGREE** with the sentence

Circle **2** if you **MODERATELY DISAGREE** with the sentence

Circle **3** if you **MILDLY DISAGREE** with the sentence

Circle **4** if you **MILDLY AGREE** with the sentence

Circle **5** if you **MODERATELY AGREE** with the sentence

Circle **6** if you **STRONGLY AGREE** with the sentence

20. I look forward to going to school	1	2	3	4	5	6
21. My parents treat me fairly	1	2	3	4	5	6
22. I like being in school	1	2	3	4	5	6
23. My friends are mean to me	1	2	3	4	5	6
24. I wish I had different friends	1	2	3	4	5	6
25. School is interesting	1	2	3	4	5	6
26. I enjoy school activities	1	2	3	4	5	6
27. I wish I lived in a different house	1	2	3	4	5	6
28. Members of my family talk nicely to one another	1	2	3	4	5	6
29. I have a lot of fun with my friends	1	2	3	4	5	6
30. My parents and I do fun things together	1	2	3	4	5	6
31. I like my neighbourhood	1	2	3	4	5	6
32. I wish I lived somewhere else	1	2	3	4	5	6
33. I am a nice person	1	2	3	4	5	6
34. This town is filled with mean people	1	2	3	4	5	6
35. I like to try new things	1	2	3	4	5	6
36. My family's house is nice	1	2	3	4	5	6

37. I like my neighbours	1	2	3	4	5	6
38. I have enough friends	1	2	3	4	5	6
39. I wish there were different people in my neighborhood	1	2	3	4	5	6
40. I like where I live	1	2	3	4	5	6

Section C

Work Engagement Scale (WES)

The following 13 statements are about how you feel at school. Please read each statement carefully and decide if you ever feel this way about your school work. If you have never had this feeling, write “0” (zero) in the space preceding the statement. If you have had this feeling, indicate how often you feel it by circling the number (from 1 to 6) that best describes how frequently you feel that way.

1 never almost never	2 or very infrequently	3 Quite infrequently	4 sometimes	5 quite frequently	6 very frequently	7 almost always or always
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	STATEMENT	SCALE								
1	I get so involved in my school work that I lose track of time.	never or almost never	1	2	3	4	5	6	7	almost always or always
2	I am rarely distracted when doing my school work.	never or almost never	1	2	3	4	5	6	7	almost always or always
3	I am very absorbed in my school work.	never or almost never	1	2	3	4	5	6	7	almost always or always
4	When I am working, I often lose track of time.	never or almost never	1	2	3	4	5	6	7	almost always or always
5	I feel I am able to contribute new ideas.	never or almost never	1	2	3	4	5	6	7	almost always or always

STATEMENT		SCALE								
6	I am passionate about my school work.	never or almost never	1	2	3	4	5	6	7	almost always or always
7	I feel energised when I learn.	never or almost never	1	2	3	4	5	6	7	almost always or always
8	I am enthusiastic about my school work.	never or almost never	1	2	3	4	5	6	7	almost always or always
9	I get excited when I perform at school.	never or almost never	1	2	3	4	5	6	7	almost always or always
10	I feel a lot of energy when I am learning at school.	never or almost never	1	2	3	4	5	6	7	almost always or always
11	I am full of energy in my academics.	never or almost never	1	2	3	4	5	6	7	almost always or always
12	I feel alive and vitality when I learn.	never or almost never	1	2	3	4	5	6	7	almost always or always
13	I feel physically strong at school.	never or almost never	1	2	3	4	5	6	7	almost always or always

Section D Academic Performance Table

Please list the subjects you take at school in the table below and the corresponding level of achievement in the most recent examination session (April exam).

	Subject	Performance level in most recent examination (As a percentage)
1		
2		
3		
4		
5		
6		
7		
8		
9		
Average		

The end. Thank you again for your participation in this research project.