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MAFIKENG CAMPUS

®

**THE DEVELOPMENT AND VALIDATION OF A HAPPINESS AND
LIFE SATISFACTION SCALE FOR ADULTS IN AFRICA.**

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Thesis submitted in partial fulfilment of the requirements for the award of Doctor of
Philosophy degree in Psychology,

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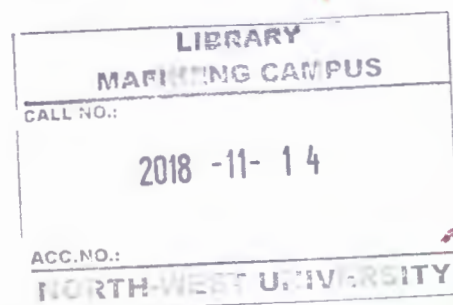
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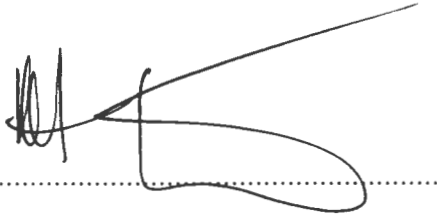
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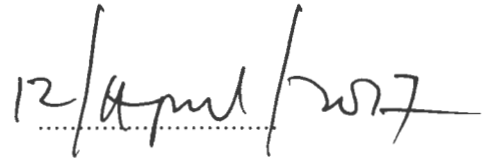
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DECLARATION

I declare that this thesis titled “The development and validation of a happiness and life satisfaction scale for adults in Africa” has not been submitted by me for any degree at this or other University; that it is my own work in design and execution, and that all materials contained in this work have been duly referenced and acknowledged.

Awosola, R. K. 

12/04/17

Name and Signature

Date

DEDICATION

This work is dedicated to the memory of my late father Rufai Ibikunle Awosola (Eegun) for his words of wisdom that he imparted to me, also to my mother Sauliat Temitayo Awosola. Lastly, to my adopted mother Dr. Regina Clement Akpan who taught me that there is no limit to forgiveness.

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LIST OF ABBREVIATIONS

➤ CFA	Confirmatory Factor Analysis
➤ CFI	Comparative Fit Index
➤ CHI	Chinese Happiness Inventory
➤ DTM	Decision Theory Model
➤ EFA	Exploratory Factor Analysis
➤ HLSS	Happiness and Life Satisfaction Scale
➤ IRT	Item Response Theory
➤ NNFI	Non-Normed Fit Index
➤ OECD	Organisation for Economic Cooperation & Development
➤ OHQ	Oxford Happiness Questionnaire
➤ PCA	Principal Component Analysis
➤ PCFI	Parsimony Comparative Fit Index
➤ PNRI	Parsimony Normed Fit Index
➤ RMSEA	Root Mean Squared Error of Approximation
➤ SDT	Self Determination Theory
➤ SHS	Subjective Happiness Scale
➤ SRMR	Standardised Root Mean Squared Residual
➤ SWB	Subjective Wellbeing
➤ SWLS	Satisfaction With Life Scale

ABSTRACT

Subjective wellbeing consists of happiness and life satisfaction devoid of any unpleasant emotion. Measurement of happiness and life satisfaction is important because it allows people to determine their own criteria for life and the value they attach to such criteria. Africa has been regarded as a black spot as far as happiness and life satisfaction are concerned; this is due to the paucity of research on happiness and life satisfaction among Africans. Not only that, there is no Africa indigenous scale among the plethora of scales use in measuring happiness and life satisfaction. This consequently creates a gap in knowledge. To close this gap, an indigenous happiness and life satisfaction scale was conceived and developed using a three stage method (stage 1 = 48, stage 2 = 408, stage 3 = 1468 participants) amongst adult Africans. A sequential mixed method approach and cross sectional design were adopted for data collection to validate the proposed Happiness and Life Satisfaction Scale (HLSS). Data were analysed using Cronbach alpha for internal consistency, correlation analysis, exploratory factor analysis and confirmatory factor analysis. At the end of the stage 1 of the study, which took place in Nigeria and South Africa, 42 items were retained in the happiness subscale and 47 items were retained in the life satisfaction subscale; also face and content validities were built into the process of arriving at these items. At stage 2, which took place in Nigeria only, the 42 item happiness subscale and 47 item life satisfaction subscale were field tested to evaluate the performance of the items with the aim of eliminating items that performed poorly. Thirty (30) items were retained in the happiness subscale and thirty-four (34) items were retained in the life satisfaction subscale. The third stage of the research took place in both Nigeria and South Africa. The Thirty (30) items happiness subscale and thirty-four (34) items life satisfaction subscale were subjected to exploratory factor analysis which yielded one factor solution. This was further validated by means of confirmatory factor analysis. The fit statistics indicated that the model fit was acceptable and confirms the one factor solution of the 23 items for happiness subscale and 28 item life satisfaction subscale of the happiness and life satisfaction scale. The model shows a good fit of SRMR = .065; PRATIO =

.923; PNFI = .602; PCFI = .615 for happiness subscale and SRMR = .059; PRATIO = .931; PNFI = .644; PCFI = .657 for the life satisfaction subscale. Thus the one factor solution was confirmed. The analysis further indicated that the final scale showed a satisfactory internal consistency ($\alpha = 0.92$) for the happiness subscale and ($\alpha = 0.94$) for the life satisfaction subscale. The study also conducted convergent and discriminant validities by correlating the happiness subscale with the Social Health Inventory and Zung depression scales with coefficients of -0.22 and 0.38 (See hypotheses 1 &3). Similar analysis was conducted for the life satisfaction subscale with coefficients of -0.28 and 0.47 (See hypotheses 2 &4). Overall, the results provided satisfactory psychometric properties for the happiness and life satisfaction scale. The scale would be useful for policy makers, social welfare consultants, and scholars as a “proxy” measure for happiness and life satisfaction among the indigenous African population. The scale will provide opportunity to make accurate assessments of the level of happiness and life satisfaction of Africans and will help in providing necessary intervention as well as giving insight into human behaviour and decision making processes.

Key words: Happiness, life satisfaction, validity, reliability, Africans, individualistic, collectivistic

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Happiness, life satisfaction and quality of life are related concepts which are subsets of subjective well being (SWB) (Khramtsova, Sarrino, Gordeeva & Williams, 2007; Kortt, Dollery & Grant, 2014). According to Argyle and Crossland (1987), Diener (2000) and Wren-Lewis (2014) SWB is an individual's affective and cognitive appraisal of his/her life. Veenhoven (1997) defines SWB as a set of affective and cognitive evaluations regarding an individual's life including how good it feels, how well it meets one's prospects and how enviable it is judged to be. Diener (2006) and Wren-Lewis (2014) postulate SWB as an all encompassing term for the various personal evaluations people make concerning their lives, the events that they are experiencing, their bodies and mind as well as the condition in which they live. Such evaluations could be pleasant or unpleasant, entail judgements and feelings about life satisfaction, interest and commitment, affective reactions such as joy and sorrow to life events as well as satisfaction with work, relationships, health, recreation, meaning and purpose (Diener & Ryan, 2009).

SWB has three dimensions which are: cognitive evaluation of a person's life (life satisfaction), positive affect and negative affect (Pavot & Diener, 1993). Life satisfaction, which is the first dimension of SWB, has two segments, which are; a global perspective of person's life as well as having the intention and motivation to live the life in full, and the other segment focuses on domain specific aspects such as personal perspective of life, personality traits, emotions, and socio-cognitive considerations (Steger, Kashdan, & Oishi, 2008). The second dimension of SWB, which has to do with positive affect, refers to the frequency of positive as well as pleasurable emotions such as joy and happiness, among others. Negative affect, which is

the third dimension, consists of adverse emotions such as sadness, feeling dejected, anger, fear and anxiety (Swart & Rothmann, 2012). These definitions of SWB are colloquially synonymous in that they all encompass all aspects of SWB, most especially good mental functioning, engagement, meaning, satisfaction and affective states.

Recently, the 2016 world happiness report (Sachs, Becchetti, & Annett, 2016), the 2015 world happiness report (Helliwell, Layard, & Sachs, 2015), and The Pew Global Attitude Project (2007) revealed that people in most of the rich and developed countries are happier, while the rest of the world are catching up. In these reports, the lowest levels of life satisfaction are found in Africa. Besides, African countries were shown to be trailing other world regions (Helliwell, *et al.*, 2015; Pew Global Report, 2007; Sachs, *et al.*, 2016). These are among the reports that placed African countries at the bottom of the ladder as far as happiness and life satisfaction are concerned. The problem associated with these reports is the overgeneralisation of definition and measurement of wellbeing across cultures. That is, their definition of SWB is Eurocentric and uses instruments developed based on European samples across cultures including Africans. This is likely to put African respondents at a disadvantage.

Joshanloo (2013) asserts that different belief domains, such as cultural, religious and superstitious beliefs can affect people's responses to happiness and life satisfaction measures. For instance, Minami (1971) states that to be happy is considered as a negative feeling among Japanese, because happiness is considered to be hazardous and can cause suffering. This belief is not only held among Japanese but cuts across some Asian cultures. In the same vein, Good and Good (1988) observe that since the 1979 Iranian Revolution, being happy is associated with shallowness, and has been seen as a negative affect in Iran. Hence, Japanese and Iranians would always be conscious of these beliefs whenever they are responding to scales that measure happiness. Similarly, Africans have many cultural beliefs regarding happiness and life

satisfaction; these beliefs are the bases Africans used in judging their level of happiness and life satisfaction. This indicates that Africans base their happiness and life satisfaction on how well they are able to meet each of these standards and most of the existing instruments are not aware of these beliefs which are critical to happiness and life satisfaction in Africa.

The reports also identified political freedom, better health care and absence of corruption as factors determining subjective wellbeing differences between the top and the bottom countries. However, researches (Biswas-Diener & Diener, 2006; Biswas-Diener, Vitterso & Diener, 2005; Kalyuzhnova & Kambhampati, 2008) have shown that people living in impoverished conditions report higher subjective wellbeing. In addition, Gundelach and Kreiner (2004) contend that happiness as a construct is influenced by two variables; these are country of residence and a stable relationship. The above results underscore the relativity of these happiness and life satisfaction scales. In some societies, the basis of evaluating their subjective wellbeing may be how much they have political freedom, a good and functional health care system, a good and qualitative social security system as the indices of happiness and life satisfaction. In Africa the emphasis is on marriage, raising good and successful children who will be able to take care of their parents when they are old because there is no social security in most African countries, to build a strong social relationship within the community, respect and recognition as routes to achieving happiness and life satisfaction (Ibem & Amole, 2013; Rodriguez-Mosquera & Imada, 2013). Consequently, a scale used to measure happiness and life satisfaction in Western societies will not be relevant in an African society because of differences in culture and belief systems plus parameters used in evaluating happiness and life satisfaction. Furthermore, the quest for an indigenous instrument cannot be over-emphasised because SWB includes one's emotional reactions to events, moods and the judgements people form about their life satisfaction, need accomplishment and satisfaction with domains such as marriage and work (Diener, Oishi, &

Lucas, 2003). Therefore a culturally specific measure is required for proper assessment of Africans' subjective wellbeing.

In furtherance of the study of SWB, a major contribution to the field came from sociologists and quality of life researchers who conducted research to establish how demographic variables like income and marriage determine SWB (Andrews & Withey, 1976; Bradburn, 1969; Campbell, Converse, & Rodgers, 1976; Diener *et al.*, 2003). Another contribution to the study came from researchers working in the field of mental health, who are interested in extending the study of mental health further than the absence of depression and grief to include the presence of happiness and life satisfaction (Jahoda, 1958). Personality psychologists who are interested in the personality make-up of happy and unhappy persons also contributed to the study of SWB (Diener *et al.*, 2003; Wessman & Ricks, 1966). Lastly, social and cognitive psychologists studied how adaptation and varying standards affect people's feeling of wellbeing (Brickman & Campbell, 1971; Diener *et al.*, 2003; Parnucci, 1995). These various influences evolved a variety of approaches which include surveys, laboratory experiments as well as thorough research on peoples' subjective wellbeing.

SWB measures provide an alternative method of assessing people's experiences as well as their judgement on various aspects of their lives. It therefore complements other notable measures of social and economic indicators (OECD, 2013). SWB measures take into account the effect of changes in socioeconomic situations on the wellbeing of individuals through their differences in tastes and preferences. SWB measures help to identify the category of people who are experiencing the best or worst life thereby providing information to decision makers in areas where comparisons need to be made among various segments of the population (OECD, 2013). It also provides a platform for cross-country comparisons; though this depends on the validity of these cross-cultural comparisons measure of SWB (OECD, 2013).

SWB measures add to an improved understanding of the components of wellbeing at the individual level. This can be achieved by identifying factors that are important to individuals' lives. The implication of this is that SWB measures can provide information on the factors contributing to people's wellbeing and the situations that can enhance their wellbeing. SWB measures provide an objective source of information on how people feel about their lives (OECD, 2013).

SWB measures also help in the assessment of policies. This can be in the form of direct use of these measures in policy evaluation. This evaluation serves the purpose of adding to other socioeconomic indicators as a measure of the results achieved by a policy. SWB measures can yield additional information to what was captured by these traditional indicators. SWB provides a relative method of evaluating the impact of diverse life events in a quantitative form (OECD, 2013).

SWB measures give an insight into human behaviour and decision making process. These instruments enable researchers to understand people's belief about their future wellbeing and the outcome of their decision. A better understanding of the peoples' decision making processes has implications for policy makers and the general public. Policy makers want to answer questions regarding why people make the decisions they make. In the same vein, the general public and businesses are interested in how subjective wellbeing influences their behaviour. SWB measures help to show various biases/assumptions people make in the decision-making process because people sometimes over-estimate or under-estimate the relative importance of some factors over other factors (OECD, 2013).

Therefore, researchers (Diener & Biswas-Diener, 2008; Kahneman & Krueger, 2006) have documented that high SWB leads to high social interaction. According to these scholars,

people with high SWB are more able to maintain supportive and rewarding relationships than persons with low baseline life satisfaction. Social bonds such as marriage can also increase SWB as shown that people who are married experience higher levels of SWB than people who are not married (Lucas, Clark, Georgellis, & Diener, 2003). In addition, Diener and Seligman (2002) reveal that people who are happy have prosperous and rewarding social relationships with life and spend less time in isolation in comparison with average people. Gilman (2001) posits that adolescents with high social interest reported high total satisfaction with life and satisfaction with their family and friends.

Furthermore, high SWB is related to self-belief, affection, leadership ability, and sociability. Individuals who are sociable and have cordial relations with their family members tend to have higher levels of subjective wellbeing (Diener & Ryan, 2009). High SWB people are likely to earn more income than others irrespective of their profession (Diener, Nickerson, Lucas, & Sandvik, 2002) and are likely to have a good working life. A similar result was obtained in researches conducted in other regions of the globe (Graham & Pettinato, 2002; Marks & Fleming, 1999). Finding from researchers such as Wright and Staw (1999) and Cropanzo and Wright (1999) indicated that persons who take pleasure in their work are rated higher by their supervisor and are assessed as being more productive, dependable, and creative which leads to higher job quality (Staw, Sutton, & Pelled, 1994). Workers who are happy have higher levels of organisational citizenship behaviour (Diener & Biswas-Diener, 2008; Donovan, 2000).

High SWB not only benefits individuals but also benefits society. Individuals who are high in SWB engage in selfless, pro-social behaviours such as volunteering for community and charity organisations more than individuals who are low in SWB (Krueger, Hicks, & McGue, 2001; Thoits & Hewitt, 2001; Tov & Diener, 2008). High SWB individuals tend to be trusting,

cooperative and possess a pro-peace attitude with more confidence in management, strong support for democracy, high tolerance for foreigners and cultural groups (Diener & Tov, 2007; Tov & Diener, 2008). They are also known to have influence on others' perception, increase output in their working life and may have a positive consequence on human development (Diener, 1984; Lyubomirsky, King, & Diener, 2005). Since sexuality is an imperative and strong aspect of human existence, the quality of an individual's sexual life is also said to be directly related to their subjective wellbeing (Dogan, Tugut, & Golbasi, 2013; Lyubomirsky *et al.*, 2005).

Subjective wellbeing consists of happiness and life satisfaction (Khramtsova *et al.*, 2007). Life satisfaction is conceptualised as the extent to which a person gauges the overall quality of his/her life as a whole (Baumeister, Vohs, Aaker, & Garbinsky, 2013). Pavot and Diener (1993) conceptualise life satisfaction as an evaluative process in which individuals assess the worth of their life on the basis of their own distinctive criteria. Life satisfaction is considered to be a state variable, which does not capture a permanent trait of people; rather it captures something present and contextual (Hultell & Gustavsson, 2008). The term "life satisfaction" refers to both content and enjoyment. It covers cognitive as well as affective appraisals (Veenhoven, 1996). Life satisfaction includes all relevant criteria in the cognition of individuals, for example, how well an individual feels, how he meets his expectation and the processes involve in meeting these expectations (Veenhoven, 1997).

Pavot and Diener (2008) assert that measurement of life satisfaction is essential and valuable because it allows people to be sure of their own criteria for life satisfaction and the value attached to such criteria. Consequently, a range of orientations to happiness might contribute to life satisfaction: these are pleasure, which originates from positive affective affect, engagement in activities which is a result of one's ability to put his strengths to use, and value, which emanates from valued life goals. Thus, Africans define life satisfaction in terms of how

successful an individual's marital life is, how well the individual is able to take care of his families (nuclear & extended), how attentive the individual is to the needs and demands of people within his/her community, which invariably leads to the individual being accepted and accorded respect as well as being recognised by his/her kinsmen. Life satisfaction in Africa is also determined by how successful and responsible the children are and lastly how religious the individual is. These are some of the criteria used in evaluating life satisfaction among Africans. This evaluation can be either positive or negative; positive evaluation connotes high life satisfaction and negative connotes low life satisfaction.

Happiness is a vague construct which is difficult to define in the literature (Hansen, 2012; Porter, 2011). Therefore it has different meanings; it can be in form of an emotional state like positive affect (Hansen, 2012; Haybron, 2007; Michalos, 1980; Schnittker, 2008) or similar to life satisfaction (Blanchflower & Oswald, 2004; Easterlin, 2005; Veenhoven, 1996). Classical economists contend that more money is just a way of being happy (Smith, 1759) and to boost the resources of a state entails a corresponding increase in the level of happiness of her citizens (Malthus, 1798). Veenhoven (1993) explains happiness as the extent to which an individual judges the aggregate quality of his/her life as being satisfactory. Veenhoven and Hagerty (2006) show that happiness increases with wealth and an entire country could be happier with a broadening in economic growth. Veenhoven (2011) uses happiness as an encompassing word for all that is perfect and it is used in place of terms like wellbeing or quality of life. This word happiness is usually used as how much one enjoys the life one lives, or more formally, the extent to which one assesses one's life as positive as a whole (Veenhoven, 2009).

There are three probable features of happiness which are positive emotion, satisfaction with life and lack of negative emotion such as depression or apprehension (Argyle, Martin & Lu, 1995; Diener, 1994). Satisfaction with life has two facets, which are global perspective of

viewing one's life, and having the impetus as well as ability to live the life in full (Steger, *et al.*, 2008). The other type centres on the specific domain like personality traits, emotion, cognitive and social consideration. Positive affect refers to the rate or presence of positive or pleasant emotions such as joy and happiness, while negative affect shows adverse emotions such as sadness or feeling of dejection (Swart & Rothmann, 2012).

As a result of the above, happiness is usually seen as inappropriate for use in scientific researches (Seligman, 2011; Swart & Rothmann, 2012), because of its subjectivity therefore its measurement cannot be precise (Zelenski, Murphy, & Jenkins, 2008). Other scholars have argued that, though happiness is subjective, it can still be measured empirically (Lyubomirsky, *et al.*, 2005).

Happiness is subjective because it is an individual's perception of his/her experiences. Its manifestation can be assessed objectively in verbalised and non-verbalised behaviours, action, physiology, attention and memory (Diener & Ryan, 2009). Self-report assessments are mostly used to measure subjective wellbeing. This entails asking the respondent to show either an overall assessment such as life satisfaction or how much they experience certain feelings. Respondents' responses vary on the response scale, the length of time, whether they are online versus retrospective reports (Diener & Ryan, 2009). Nevertheless, studies have shown that variables like current mood or surrounding environment can influence responses to items assessing overall subjective wellbeing (Pavot & Diener, 1993a). Happiness in Africa stems from feelings of pleasure and contentment with one's situation at a given period of time. These feelings of pleasure and contentment usually come from an individual's evaluation of certain aspects of his/her life as favourable. For instance, the individual evaluates his marital life as being happily married with children; the children are responsible and at the same time doing well

in their respective fields, the individual is respected and honoured by his religious group or the community; all these feelings summed together constitute happiness to an African.

Happiness and life satisfaction are important features of a desirable life because they lead to better outcomes which include financial success, supportive relationships, longevity, good mental and physical health (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; McCullough, Huebner & Laughlin, 2000). Pressman and Cohen (2005) reviewed a large number of studies and found that positive affect was related to lower morbidity, less symptoms, lower pain and long life.

Diener and Chan (2011) also reviewed seven types of studies; these were longitudinal, animal, researches in which mood and emotion are experimentally manipulated, researches where natural level of SWB are related to certain physiological processes, studies on how pain and mobility are related SWB as well as experimental and quasi-experimental researches. They reported that high SWB leads to better health and longevity. In a study by Chida and Steptoe (2008), life satisfaction and SWB were linked with reduced mortality; they also found that wellbeing is associated with lower cardiovascular mortality. It has been observed that happiness has positive effects on people' wellbeing, strengthens the immune system, enhances productivity in an individual's working life, which may lead to a positive effect on life span (Hooghe, 2012; Lyubomirsky *et al.* 2005).

Furthermore, Nolan and Surujlal (2012) opine that the healthier a woman is, the more satisfied she would be with her life. This result is in line with Strine, Chapman, Balluz, Moriarty, and Mokdad (2008) who show a positive relationship between health and satisfaction with life. Mathews, Owens, Edmundowicz, Lee, and Kuller (2006) reveal that women who are fit and had a purpose were less likely to have aortic calcification, pointing to the fact that life satisfaction

can be linked to reduce risk of aortic calcification among healthy women. Also, individuals with higher SWB tend to have a stronger immune system, have high energy and creativity as well as better cardiovascular health. They are also involved in healthier behaviours such as using seatbelts and putting on sunscreen, and less likely to get involved in alcohol and drug addictions (Diener & Biswas-Diener, 2008; Lyubomirsky *et al.*, 2005).

In addition, Sadler, Miller, Christensen, and McGue (2011) show that SWB is linked with longevity, which is independent of hereditary factors of genes and shared setting. Xu and Roberts (2010) analysed longitudinal data from Alameda County and reported that positive affect and life satisfaction predicted longevity among young and older adults. They conclude that positive emotion is a potential agent for promoting longevity and health. Other benefits of SWB include lower levels of insomnia (Brand, Beck, Hatzinger, Harbaugh, Ruch, & Holsboer-Trachsler, 2010) and stress (Haar & Roche, 2010). With regards to organisation outcomes, there exists a relationship between life satisfaction and turnover intentions (Rode, Rehg, Near, & Underhill, 2007). It has been shown that individuals with high subjective wellbeing are inclined to have higher levels of self confidence, warmth, leadership ability, sociability, and they show a tendency to have more friends (Diener & Ryan, 2009).

In the literature, the terms happiness, life satisfaction, wellbeing and quality of life tend to be used interchangeably (Jefferes & Dobos, 1995; Csikszentmihalyi, 1999; Cummins, Lau, & Stokes, 2004; Diener, Lucas, & Oishi, 2002; Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Lyubomirsky, 2001; Michalos, 2004; Veenhoven, 1991). This sometimes results in confusion with regards to their distinctiveness.

Happiness and life satisfaction as concepts are interrelated but not similar although they have a total of 60 per cent common variation (Adams, 1997; Diener & Diener, 1995). Erdogan,

Bauer, Truxillo, and Mansfield (2012) assert that happiness and life satisfaction are not the same, but knowledge regarding life satisfaction is vital to appreciate what makes people happy. There is even initial evidence that suggests life satisfaction may be a better determinant of job performance by comparison with job satisfaction (Jones, 2006). Hence, life satisfaction and its upshot (marital satisfaction, job satisfaction), happiness, are being recognised by organisations such as AOL, Adobe and Zappos.com as essential in delivering customer service and employee morale (Cook, 2011; Erdogan *et al.*, 2012; Hsieh, 2010).

Vella-Brodrick, Park, and Peterson (2009) report that the three approaches to happiness influenced life satisfaction further than socio-demographic as well as personality variables among American and Australian respondents, while Peterson, Park, and Seligman (2005) assert that each of the orientations to happiness is associated with life satisfaction. Furthermore, researches have revealed that commitment and meaning are related to life satisfaction in comparison with happiness (Peterson *et al.*, 2005; Schueller & Seligman, 2010; Vella-Brodrick *et al.*, 2009). Moreover, Mirkhan, Shakerinia, Kafi, and Khalilzade (2014) report a direct relationship between happiness and life satisfaction amongst female teachers and their study also indicated that happiness is the only factor predicting life satisfaction.

While Gundelach and Kreiner (2004) assert that happiness and life satisfaction are two distinct variables because they do not belong to the same underlying factor, this is contrary to some literature that says the two variables measure the same construct although the two are strongly correlated. Gundelach and Kreiner (2004) argue further that if the two variables are part of the same underlying factor then they must be validated the same way by the same independent factors but the analysis revealed that the two variables are not identical. Gundelach and Kreiner (2004) concluded that happiness is an emotional variable and life satisfaction is more of

cognitive variable. This implies that happiness is a statement of a general concern while life satisfaction is more tangible and relates to more specific elements in life.

Peiro (2006), while differentiating between happiness and life satisfaction, opines that non-financial situations affect both happiness and life satisfaction but financial situations show a rather different association with happiness and life satisfaction. For instance, unemployment presents a high and indirect relationship with life satisfaction but not with happiness. Also, salary or earning has a stronger relationship with life satisfaction than with happiness. Peiro (2006) concludes that happiness as well as life satisfaction are two separate spheres of wellbeing. In Africa, both economic and non economic variables influence happiness and life satisfaction. But emphasis is laid on non economic variables like social relationship, good and responsible children, being happily married and recognition. There are folklores that support the importance of these factors over economic variables such wealth and other associated variables such as good and comfortable home, big farm land, herd of cattle and investments (Mahadea, 2013).

Andrews and Withey (1976) contend that life satisfaction is a distinct variable from the two variants of affect (negative and positive affect). Lucas, Diener and Suh (1996) use multitrait–multimethod analyses to show that pleasurable affect, unpleasurable affect and life satisfaction were distinct concepts. This group of researchers sees happiness and life satisfaction as different constructs. Baumeister *et al.* (2013) conceptualise and measure happiness in two different ways, namely affect balance and life satisfaction. Affect balance is a momentary feeling of having more pleasant than unpleasant emotional states while life satisfaction is an integrative, evaluative measurement of a person's life at a particular point in time.

In addition, happiness is an emotional state, whereas life satisfaction is concerned with an overall cognitive assessment of an individual's life (Khramtsova *et al.*, 2007). This group of

scholars see both happiness and life satisfaction as separate though related (Adams, 1997; Diener & Diener, 1995). Furthermore, Helliwell and Putnam (2004) conceptualise happiness as a relatively short term, situation-dependent expression of mood whereas life satisfaction is a longer term, more stable evaluation. Happiness is seen as a more expressive, situational and mood associated aspect of subjective wellbeing, which is more susceptible as well as subject to temporary situation fluctuation (Brockmann, Delhey, Welzel, & Yuan, 2009; Sarracino, 2013). Life satisfaction on the other hand refers to a more cognitive and stable assessment of wellbeing (Diener, Lucas, Schimmack, & Helliwell, 2009). According to Sood and Gupta (2014) happiness provides the basis for life satisfaction and it is a situation that is achieved by the standard of one's belief, efforts and convictions which is a function of certain criteria being met. Life satisfaction, on the other hand, results from seeing oneself as being in a situation of happiness (Cohn *et al.*, 2009).

Happiness, wellbeing as well as life satisfaction are treated as the same as each other, so that a high grade in one is related to a high grade in the others (Kalyuzhnova & Kambhampati, 2008; Veenhoven, 1991). Nathawat (2012) stated that happy people always want to be satisfied with lives. Similarly, research has also shown the effect of happiness on life satisfaction (Poursardar, Sangari, Abbaspour, & Alboukurdi, 2012). Africans conceptualise happiness and life satisfaction to be similar in certain respects because the same factors are considered as important to both happiness and life satisfaction. For instance, seeing ones grand children gives a feeling of happiness while an individual in Africa will look at all the events of his/her life in order to conclude that he/she is satisfied with life. This means that happiness and life satisfaction are related and they are also separated (Dutt & Radcliff, 2009; Lane, 2000; Putman, 2001; Diener & Seligman, 2002). Therefore, what is noticeable in these different definitions and

similarities is that this group of scholars view both happiness and life satisfaction as separate though related.

Although there have been several attempts to define, differentiate and establish similarities between happiness and life satisfaction, the concern here is not about the definition of the two concepts; rather it is about the validity and suitability of the happiness and life satisfaction instruments developed in Western countries to tap into the meaning of happiness and life satisfaction among adult Africans. Africans define happiness in terms of contentment with their immediate environment, social harmony and a tight family relationship (Pflug, 2009).

1.2 History of Scale Development

Available literature indicates that several attempts have been made to measure these foregoing constructs as shown in the Table below:

Table 1: Showing Happiness and Life Satisfaction Scales with their Year and Place of Development

Title of the Scale	Author(s)	Year	Construct	Country	Shortcoming
Life Satisfaction Index	Neugarten, Havighurst, & Tobin	1961	Life Satisfaction	United States of America (USA)	It only measures Life Satisfaction and is meant for older respondents.
Life Satisfaction Index Z	Wood, Wylie, & Sheafor	1969	Life Satisfaction	USA	It only measures Life Satisfaction and is meant for older respondents.
Life Satisfaction Scale	Singh & Joseph	1970	Life Satisfaction	India	It only measures Life satisfaction.
Affectometer 2 Scale	Kammann & Flett	1983	Happiness	Australia	It measures Happiness only.
Satisfaction with Life Scale	Diener, Emmons, Larsen, & Griffin	1985	Life Satisfaction	USA	The items of Scale are too small to measure all the domains of Life Satisfaction.
Oxford Happiness Inventory	Argyle, Martin, & Crossland	1989	Happiness	United Kingdom (UK)	It measures Happiness only
Perceived Life Satisfaction Scale (PLSS)	Adelman, Taylor, & Nelson	1989	Life Satisfaction	USA	It measures Life Satisfaction only.

Students Life Satisfaction Scale (SLSS)	Huebner	1991a	Life Satisfaction	USA	The Scale measures only Life Satisfaction.
Life Satisfaction for the Elderly Scale	Salamon & Conte	1992	Life Satisfaction	USA	The scale is meant for the elderly; not suitable for younger people
Comprehensive Quality of Life Scale (ComQol)	Cummins, McCabe, Romeo, & Gullone	1994	Life Satisfaction	Australia	It measures Life Satisfaction.
The Multidimensional Students' Life Satisfaction Scale (MSLSS)	Huebner	1994b	Life Satisfaction	USA	It contains items that measure Life Satisfaction among high school Students.
Extended Satisfaction with Life Scale (ESWLS)	Alfonso, Allison, Rader, & Gorman	1996	Life Satisfaction	USA	It contains items that measure Life Satisfaction only.
Subjective Happiness Scale	Lymbormirsky & Lepper	1999	Happiness	USA	It measures Happiness only.
Fordyce Emotions Questionnaire	Fordyce	2002	Happiness	USA	It measures Happiness only.
The Multidimensional Students' Life Satisfaction Scale-Adolescent Version (MSLSS-A)	Giligan, & Huebner	2002	Life Satisfaction	USA	The scale is meant for adolescent only.
The Oxford Happiness Questionnaire	Hill & Argyle	2002	Happiness	United Kingdom (UK)	It measures Happiness only.
Brief Multidimensional Students' Life Satisfaction Scale	Seligson, Huebner, & Valois	2003	Life Satisfaction	USA	The Scale measures only Life Satisfaction.
Authentic Happiness Inventory	Peterson	2005	Happiness	USA	It measures Happiness only.
Life Satisfaction Index for the Third Age LSTIA	Barett & Murk	2006	Life Satisfaction	USA	Not suitable for younger respondents.
Life happiness Scale	Chan	2011	Happiness	Singapore	It measures happiness only.

In summary, most of the existing measures of happiness and life satisfaction view these constructs as personal attributes or dispositions -a westernised perspective that treats the respondents as an autonomous entity, independent of their socio-cultural environment. However,

in Africa, happiness and life satisfaction are concerned with situational factors such as norms, roles, expectations, rituals, communal relationships, status and social obligations (Kitayama & Markus, 2000; Pflug, 2009; Suh, Diener, Oishi, & Triandis, 1998; Thomas & Chambers, 1989; Triandis, 1995). This social connectivity makes individuals in Africa not to be lonely, better supported, more bonded and thus happier (Lane, 2000; Mahadea, 2013; Putman, 2001). Also, religious obligation tends to have direct influence on life satisfaction because it enhances acts of virtue, spirituality and caring for all and sundry (Hamilton, 2004). Hence, there is a need to develop measures of happiness and life satisfaction that incorporate the social-cultural values of African people.

1.3 Statement of the Problem

Subjective wellbeing measures are tools used to assess an individual's quality of life. As a result of this, there is a plethora of these measures of subjective wellbeing; nearly all came from developed nations (Lau, Cummins & McPherson, 2005). This, according to Lau, *et.al* (2005), poses a major concern for cross-cultural researchers because it casts doubt on the validity as well as reducing the worth of the scales as comparative tools. Besides, there is cultural relativity in the conceptualisation of happiness and life satisfaction. Therefore, subjective wellbeing measures designed in the technologically advanced countries may not be relevant to people living in developing countries. This is because happiness and life satisfaction are culturally construed concepts and culturally defined. This inadequacy serves as an impetus to develop a measure of happiness and life satisfaction among the African population that would take into consideration the perception and definition of happiness and life satisfaction. This scale would be of great importance to Africans because the scale would integrate their views, values, opinions, and attitudes that are connected to happiness and life satisfaction.

Likewise, it would be an error to assume that a scale developed to measure happiness and life satisfaction in one culture would be relevant in another culture (Uchida, Norasakkunkit & Kitayama, 2004). Moghnie and Kazarian (2011) for example, assert that an assessment tool of happiness and life satisfaction developed in one cultural context may not necessarily be valid in another culture. As such a culturally specific measure is required.

Moreover, evidence as presented in the above table shows clearly that none of the existing scales that measure happiness and life satisfaction were developed among Africans. In addition, Joshanloo (2013) asserts that previous researches indicated long term factors such as cultural principles and personality traits which are relatively static over time as factors affecting life satisfaction judgements more strongly than variables that are salient at that moment. Joshanloo (2013) argues further that various belief domains such as cultural, religious and superstitious beliefs may also influence an individual's responses to life satisfaction items. This shows that happiness and life satisfaction have cultural colourations (Hervas & Vazquez, 2013; Moghnie & Kazarian, 2011). For instance, having a suitor, getting married, being married, having children, social recognition by the community (e.g. giving a chieftaincy title or honour), and social harmony with family members and friends are sources of happiness and life satisfaction in most African societies (Botha & Booysen, 2013; Oishi & Diener, 2001a).

In line with this position, Mahadea (2013) contends that life events such as marriage, health, child bearing, and nature of work are a greater predictor of happiness than income. The researcher concludes that life satisfaction involves more than just earnings and happiness can be attained through religion, education, friendship and family relationships. Therefore, a valid and suitable measure of happiness and life satisfaction should tap into the real meaning of these constructs among Africans.

Scholars have also debated on the relevance of these existing scales to African culture. For example, Maluka and Grieve (2008) contend that the life satisfaction scale by Diener *et al.* (1985), which is the most commonly used among these existing scales, needs to be revised if it is to be used to evaluate life satisfaction across different cultures. Also Wierzbicka (2009) asserts that a good and happy life is fraught with cultural assumptions. This implies that the definition of a good and happy life is culture specific. From the foregoing, there is a need to develop a scale that would measure happiness and life satisfaction among Africans which would incorporate all the factors or values that they considered as prerequisites to happiness and life satisfaction.

The rationale behind this research is to develop and validate a happiness and life satisfaction scale that would take into consideration the beliefs, practices, norms and customs of Africans. The construction and validation of this scale would also be in fulfilment of Suh and Oishi's (2004) assertion that the field of study into subjective wellbeing needs to concentrate on neglected regions like Arab countries and sub-Saharan Africa. Besides, all the existing scales either measure happiness or life satisfaction separately but the present attempt is to develop a scale that would measure both happiness and life satisfaction.

1.4 Research Questions

This research will attempt to find answers to the following questions:

1. How do Africans conceptualise happiness and life satisfaction?
2. Do items in a happiness and life satisfaction scale capture the definitions of happiness and life satisfaction among Africans?
3. Is a happiness and life satisfaction scale a unidimensional scale or multi-dimensional scale?

4. What is the degree of reliability of a happiness and life satisfaction scale?
5. Are the items on a happiness and life satisfaction scales valid measure of happiness and life satisfaction among adult Africans?
6. Can a happiness and life satisfaction scale discriminate between happy and unhappy respondents?
7. Can a happiness and life satisfaction scale discriminate between respondents who are satisfied and those who are not satisfied with their lives?

1.5 Objective of the study

The objective of this study is to develop and validate an indigenous happiness and life satisfaction scale that would capture the essence of happiness and life satisfaction among Africans.

1.6 Purpose of the Study

The aim of this research is to gather information on the meaning or definition of happiness and life satisfaction among adult Africans and use the information to develop and standardise an indigenous happiness and life satisfaction scale useful to assess happiness and life satisfaction among adult Africans.

Specifically, this work will:

1. Generate items for the Happiness and Life Satisfaction Scale (HLSS); this will enable the researcher to come up with items that would be culturally sensitive to African cultural belief and practice.

2. Establish reliability for the Happiness and Life Satisfaction Scale (HLSS); this will help to ascertain consistency in the items of the scale.
3. Establish the content and face validities for HLSS by determining whether the items comprising the scale measure and seem to assess what they are supposed to assess.
4. Determine the Convergent and Discriminant validities for HLSS. This will afford the researcher the opportunity to establish the relationship between the proposed scale and other scales measuring similar traits as well as non similar traits.
5. Establish a norm for the HLSS. Normally a score on any psychological scale is meaningless without a frame of reference which is the norm. Therefore a norm would be established in order to make the scale meaningful.



1.7 Relevance of the Study

The study will be of immense benefit to Africans as the proposed scale would be culturally relevant to measure happiness and life satisfaction in an indigenous African population. Also, psychologists and other aligned professionals will benefit from the study as the scale will give them the opportunity to make an accurate assessment of the level of happiness and life satisfaction of their clients and help them in providing any necessary intervention that takes into cognisance their cultural backgrounds.

The study will be beneficial to International Agencies like the United Nations (UN), the Africa Union (AU), the United Nations Education and Scientific Commission (UNESCO) among other agencies that are concerned with the welfare and health of people. The findings of this research will be relevant to government in putting welfare programmes in place that would improve the quality of life as well as increase the provision of necessary infrastructure for the

citizenry in order to make them happy and satisfied with life. This is because information that would be generated from the scale can serve to complement other known social and economic indicators. These indicators are used by the government to determine what needs to be done.

There have been many researches on subjective wellbeing. However, little is known within the African context. This study will contribute to the body of knowledge as well as existing literature by developing and standardising a happiness and life satisfaction scale for Africans. The proposed scale will be of theoretical and practical relevance in the area of positive psychology among Africans. It will also add to the issue of cultural and cross cultural comparisons of happiness and life satisfaction. It would open a new avenue to studying happiness and life satisfaction among Africans.

1.8 Operational Definition of Terms

HAPPINESS: Refers to the feeling of pleasure, contentment with one's situation at a given period of time as would be measured in the proposed scale. A high score will show a high happiness level while a low score will indicate a low level of happiness.

LIFE SATISFACTION: Is the evaluation that an individual makes about events and happenings in his/her life, whether satisfactory or not satisfactory. A high score shows high life satisfaction and a low score shows low satisfaction.

ADULT AFRICANS: All Africans who are above 18 years old.

SCALE: Scale refers to an instrument used in measuring a psychological construct or trait.

VALIDATION: Is the evaluation of appropriateness and usefulness of test items

RELIABILITY: Is the consistency in the test scores of the examinees.

NORM: Is a neutral point on a scale that differentiates between high and low life satisfaction or happiness.

UNIDIMENSION: A situation whereby the items on a scale are measuring the same factor.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Background

In this section, theories that attempt to explain happiness and life satisfaction are presented:

2.1.1 Telic Theory

Telic theory by Diener (1984) posits that subjective wellbeing is achieved when goals and needs are attained. Our needs and goals are the desires that an individual strives to meet or achieve. Wilson (1960) asserts that satisfaction of needs brings happiness and unmet needs lead to unhappiness. Researches in the area are based on an implicit model related to the needs and goals. Diener and Ryan (2009) contend that in the past, philosophers have questioned whether fulfilment of desire leads to wellbeing or some needs are deleterious to wellbeing and what happens when one's desire is at variance with each other? Scitovsky (1976) states that "being on the way to those goals and struggling to achieve them are more satisfying than is the actual attainment of the goals". The causes of Subjective Well Being (SWB) are not generic and the means of achieving these goals are relative; they are function of an individual's needs and wants. Various types of goals are related to different features of SWB. For instance, persons who are high in SWB perceive their goals as more imperative and stronger in their likelihood of success (Emmons, 1986). Therefore, a person's life tasks or needs are determined by developmental stages, cultural values and personal needs (Cantor & Kihlstrom, 1989). In USA, educational achievement and relationships are representative of life tasks among high school students whereas social membership is an ideal life task among pensioners (Cantor & Harlow, 1994).

This theory explains the difference in happiness and life satisfaction among people, which is a result of goals, and needs as well as tasks. An African who lives in a communal system has a set of goals of having children because they give a sense of security in old age and this is not the case for someone who lives in individualistic societies such as the USA or Europe (Onyishi, Sorokowski, Sorokowska, & Pipitone, 2012). Therefore what constitutes SWB in Africa depends on an individual goals, needs and aspirations as well as roles that an individual plays in the society, which cannot be generalised to incorporate other people living in other cultures. This observation is consistent with the study by Oishi, Diener, Lucas, and Suh (1999), which reports that the extent to which fulfilment of esteem needs predict overall life satisfaction differs across cultures and depends on underlying cultural ideals. Oishi *et al.* (1999) further suggest that universality theories of SWB need to be complemented with the theories that account for cross-cultural variations in values. A major limitation of this theory is that it concentrates more on the intrinsic aspect of happiness and life satisfaction leaving aside the extrinsic component, which is the happiness and life satisfaction Africans obtain by comparing themselves with others. Also, these needs and goals are not formulated in a clear and concise way at the same time not tested (Diener, 1984). The chief strengths of the telic theory include portraying subjective wellbeing as a specific desire; which the individual is aware and consciously striving to achieve it which would invariably leads to happiness when such desire is met. It also explains subjective wellbeing in a clear term, so that individual knows what to do in order to attain subjective wellbeing (Diener, 1984).

2.1.2 Self Determination Theory

The Self Determination Theory (SDT) as propounded by Deci and Ryan (1985a) identifies three psychological needs, known as autonomy, competence and relatedness. The need for autonomy entails the individual acting in relation to their own opinions and choices as well as

being accountable for their actions (Deci & Ryan, 1985a, 1985b; Deci & Ryan, 2000; Gagne & Deci, 2005; Sapmaz, Dogan, Sapmaz, Temizel, & Dilek Tel, 2012). The need for competence involves the effort to succeed toward to altering tasks and the capacity to achieve the desired outcomes despite obstacles which can emanate from the environment (Baard, Deci, & Ryan, 2004; Deci & Ryan, 1985a). The need for relatedness is seen as an individual's wish to be connected to other people and the community as a whole, as well as having a meaningful relationship. This also reflects a sense of belongingness, and establishing a close relationship with the environment (Baumeister & Leary, 1995; Deci & Ryan, 2000; Kowal & Fortier, 1999; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). People must gratify these psychological needs in order to have a feeling of happiness in their lives (Field & Buitendach, 2011).

In other words, SDT affirms that happiness and positive psychological wellbeing result from the degree to which people are able to gratify their basic universal psychological needs within their immediate environment (Field & Buitendach, 2011). The relevance of this theory is that SDT assumes that individuals are motivated to satisfy these needs within the context of their environment. The environment, on the other hand, presents various challenges to the individuals that are striving to meet these needs so that they can achieve the desire outcome which is high subjective wellbeing. Since there are differences between the environment in Africa and in the developed countries where these existing scales originated, then the scale for measuring the outcome of people's relationship with their environment in Africa should also be different. One major weakness of SDT is that the theory does not accept the existence of achievement motivation. SDT also assumes that everybody has a willingness to develop and it is the duty of the facilitators to evoke inherent motivation (Vansteenkiste & Sheldon, 2006). Nonetheless its major contribution to happiness and life satisfaction lies in its broad scope which encompasses a wide range of phenomena and its application varied across cultures and in many life domains

(Deci & Ryan, 2008). Also, the assumption that people have needs to satisfy and satisfaction of these psychological needs results in high subjective wellbeing (Field & Buitendach, 2011).

2.1.3 Need Theory

Need theories are based on the understanding that an individual is motivated to fulfil a desire or achieve a need (Redmond, 2010). According to Maslow's (1970) hierarchy of needs, people are motivated to satisfy/meet their basic needs, and living a good life will mainly depend on the number of needs we are able to satisfy. The more needs that are gratified; the happier the person will be (Bekhet, Zauszniewski, & Nakhla, 2008). Maslow's theory is arranged in order of concreteness, ranging from the lower order (physiological needs) to the higher order (self actualisation). Furthermore, Maslow (1970) asserts that lower order needs are more localised, concrete, and restricted than higher order needs, while satisfaction of these higher order needs are unrestricted (Bekhet *et al.*, 2008). Satisfaction of higher needs make people more extremely happy; but gratification of lower order needs involves better environmental conditions (family, societal norms, economic condition, political, education, etc).

Maslow hierarchy of needs identifies what makes up each of these needs (Redmond, 2010); for example, children represent means of achieving need for security in old age, especially in Africa where there is no social security, they also represent companionship, respect and positive self image. This is one of the reasons why Africans tend to have large families by giving birth to many children because they are seen as a source of self esteem, though it is not fashionable nowadays due to socio-economic factors. In much of sub-sahara Africa, people are married solely to have children because of their contribution to happiness and life satisfaction (Onyishi, Sorokowski, Sorokowska & Pipitone, 2012).

Muomah (2010) asserts that Nigerians desire having family and children because they are socially desirable. This great emphasis on children underscores their contribution to happiness among African families; unlike in the other parts of the world where having a child is by choice. Consequently, a scale developed in a society where, for instance, children are not regarded as a means of achieving subjective wellbeing would not be appropriate in society where heavy emphasis is placed on children as a means of achieving happiness and life satisfaction (Muomah, 2010; Onyishi, *et al.* 2012). In terms of limitation, the need theory used terms that have different definition across cultures thereby making their operationalisation to be culture specific and it might not represent the individual needs in some culture (Gambrel and Ciani, 2003). According to McLeod (2007), the Maslow need hierarchy can be falsified because it is possible to attain self-actualization without satisfying the lower needs. While its major strength lies in the identification of routes to happiness and life satisfaction. The theory focuses on the individual's own construct and experiences (Redmond, 2010).

2.1.4 Broaden and Build Theory of Positive Emotions

Broaden and build theory of positive emotions was developed by Fredrickson (1988). The theory states that pleasant emotions are evolved mechanisms that help to build up enduring personal resources (Cohn *et al.*, 2009; Fredrickson & Cohn, 2008). Unlike unpleasant emotions that narrow thought, cognition, and physiology towards coping with an immediate danger or crisis (Carver, 2003; Cosmides & Tooby, 2000), pleasant emotion produces new, broad ranging feelings and actions that are usually not vital to one's immediate safety, wellbeing or survival. After some time, these new experiences are built into a resource that can alter people's lives. Pleasant emotions predict value outcomes such as health, wealth and long life which are indices of happiness and life satisfaction.

The relevance of this theory is that it explains how individuals build happiness and life satisfaction from their repertoire of positive experiences. The experiences help people to achieve happiness and life satisfaction over time. Therefore, persons from different regions of the globe may not have similar experiences because experience is a relative term, so what constitute happiness and life satisfaction in one region of the globe would be different from another region. Thus, according to Moghnie and Kazarian (2011), happiness is a culturally constructed concept which is not universal rather it is culturally bounded and defined. In the same vein, the measuring instrument should also be relative to these experiences.

2.1.5 Social Comparison Theory

Social comparison theory was propounded by Festinger (1954). The theory states that an individual needs to seek information from a group of persons to validate or reassess their capabilities. The social comparison theorists are of the view that individuals compare themselves with others in a bid to assess their behaviour, verify their actions, and feel better about their decisions or place in society (Festinger, 1954). An individual not only needs a group or others to affirm his/her abilities but needs others to realise the degree he/she can use these capabilities and ultimately confirm other people's opinions. This comparison can be upward comparison or downward comparison. Upward comparison means an individual tends to compare himself/herself with another person who is superior to him/her, while downward evaluation suggests that an individual tends to compare himself/herself with someone who is worse off than himself/herself.

This theory is relevant to happiness and life satisfaction among Africans because of their communal way of living and their strong allegiance to group norms. Africans, therefore, derive their happiness and life satisfaction from the group, as the group has an acceptable level of status

that an individual strives to attain. This assertion is consistent with McDowell and Newell (1996) that say personal assessment of one's condition compared to an external reference standard or to one's aspiration may be called life satisfaction. Africans also make both upward and downward comparisons depending on the situation and this is a major source of self-evaluation and self-enhancement. If the evaluation is upward comparison, then it is self-evaluation and it is self-enhancement when the comparison is downward comparison. One of the shortcomings of this theory according to Aydin (2012) is that the theory downplays the ability of external factors to influence happiness. Furthermore, social comparison theory views intellectual yardstick as a determinant of happiness as against life events or circumstance. Despite these limitations, the theory explains happiness and life satisfaction as continuous judgement processes which are products of our mental evaluations (Aydin, 2012).

2.2 Scale Development Theories

2.2.1 Item Response Theory

The Item Response Theory (IRT) is a theory for designing, analysing, and scoring of tests, questionnaires as well as similar instruments assessing abilities, attitudes or other variables (Van Alphen, Halfen, Hasman & Imbos, 1994). Unlike other theories that assume that test items are of the same level of difficulty, IRT treats the difficulty of each item as information to be considered when developing a scale, especially when important decisions are required (Lord, 1980). IRT is based on the premise that test scores reveal a latent trait, and in addition, the relationship between response and trait can be explained for each test item by a monotonically increasing function called the item characteristics curve (ICC). Individuals with higher levels of the trait have higher expected probabilities for answering an item correctly. Historically the IRT

emerged from the field of psychometrics to evaluate respondents' ability on latent trait (Xinming & Yiu-Fai, 2014). It also used to evaluate test items, questionnaire and other instruments.

Therefore, IRT focuses on the items of the test by matching the testee's ability with each item in the test. IRT is based on the premise that a correct response to an item is a function of person-parameters and item parameters. The person-parameter is thought to be the trait that the test is measuring while item parameters are characterized by their difficulty, discrimination and the probability that the individual with low ability will score the items correctly by chance or guessing. Once the item parameters have been confirmed, IRT methods offer numerous incentives to scale designers. First, IRT methods give a statistic showing accuracy with which respondents' trait level is approximated. Second, trait-level estimates can be made autonomous of the specific set of items administered (Lord, 1980).

The strength of the IRT lies in the fact that it gives the test developer the opportunity to know the features of test items and at the same time determine the ability of each test taker (respondent). IRT also emphasises the relativity of test items; that is, the test items usually emanate from proposed respondents' experiences, values and culture. As well, IRT provides a formidable platform for evaluating how well a scale performs and how well each item in the scale performs (Hambleton, Swaminathan & Rogers, 1991). But the chief drawback of IRT is that it requires relatively complex estimation procedures, which could be sometimes confusing to a growing test developer.

2.2.2 Classical Test Theory of Reliability

Classical test theory (CTT) is a body of associated psychometric theories that forecast outcomes of psychological testing such as the difficulty of items or the ability of test takers. The classical test theory was first codified by Novick (1966) and it was later described in the classic

book of Lord and Novick (1968). The objective of classical test theory is to know and improve the reliability of psychological tests. The classical test theory assumes that each testee has a true score that would be obtained if there are no errors in measurement (Lord & Novick, 1968; Novick, 1966). A person's true score is defined as the expected number of correct scores over an endless number of independent administrations of the test. A true score is never observed by test administrators; what is always observed is true score plus error score and this is called the observed score. Originally, the CTT sought to estimate the reliability of psychological test as well as evaluate the performance of the individual taking the test and the difficulty level of the questions and tasks in the test (Psychometric Test, 2017)..

Charles Spearman was one of the originators of CTT, the theory centres on the relationship between observed, true and error scores (Traub, 1987). This relationship determines the quality of the test scores. The reliability of the observed test scores is defined as the proportion of true score variance to the observed score variance. Thus, the reliability of test scores becomes higher as the proportion of error variance in the test scores becomes lower and the reliability of the test scores becomes lower when the proportion of error variance in the test scores becomes higher. The implication of this theory is that the test developer must reduce the ratio of error variance in order to increase the reliability of the scale. One of the major shortcomings of CTT is that examinee characteristics are built into the test scores and cannot be separated; each can only be interpreted in the relation to the other (Hambleton *et al.* 1991). Another limitation of this theory is that the standard error of measurement is assumed to be constant for all testees. Also in CTT, the test items and person characteristics such as item difficulty parameters and person scores are not reliable because they are population depended thereby making it difficult to assess individuals' abilities with different forms of test (Xinming & Yiu-Fai, 2014).

2.2.3 Decision Theory Model

The Decision Theory Model (DTM) was originally known as the Statistical Decision Theory developed by Wald (1950). At the time it was propounded, it only applied to the decision taken during the inspection and quality control of industrial products. The theory was later applied to psychology by Cronbach and Glaser (1965). Its relevance to psychology was in its application to the construction and interpretation of psychological test scores for personnel selection. According to Anastasi and Urbina (2005), the decision theory is essentially an attempt to put the decision making procedure into quantitative form, so that available information may be used in arriving at the most effective decision in a specific situation. Numerical data or scores make comparison of people easier and elucidate information better than words and also allow statistical manipulation (Gatewood & Field, 2001). Raw scores obtained as a result of taking a test are not meaningful until they are interpreted and used in arriving at a decision on who should be hired for a job. The basic conjecture undergirding the use of a test in selection is that there exist individual differences and that individuals vary in their human characteristics as well as in their personality makeup (Malomo, 2012). The implication of this theory to scale development is that a good test or scale should be able to discriminate between someone who is happy from someone who is not happy with the aim of taking an appropriate decision based on the test results. However, the major objection to the theory is based on the requirement of a detailed model representing the preconception of the totality possible state of nature (Duncan & Howard, 1957).

2.2.4 Determination of Norm

Norm refers to a frame of reference and a score on a psychological test is meaningless unless it is compared against a norm. A norm is the average performance measure of a normative

group on a tested skill. The normative group is usually a representative of the intended beneficiary of a scale that shares common characteristics with a population. Crocker and Algina (1986) identified nine steps for calculating the norm. These are: identify the target population; identify the vital statistics that will be used to analyse the sample data; decide ahead of time the margin of sampling error for the statistics to be used; devise a method of selecting your sample from the target population; determine the appropriate sample size required for the sampling error within a given restriction; systematically select the sample from the population and collect the data; calculate both the values of the group statistics and their standard errors; select the types of normative scores that will be required and prepare the conversion tables; and write in details of the method and guidelines for interpretation of the norms (Maximo. 1997).

2.3 Theoretical Perspective of Happiness and Life Satisfaction

The study of happiness and life satisfaction has been viewed from different perspectives. Each of these perspectives provides a clear explanation of how subjective wellbeing, which results in happiness and life satisfaction, can be achieved (Mahon & Yarcheski, 2002).

2.3.1 Top-down Theories

The top-down theories state that an individual's innate tendency to experience the world in a certain way will affect that individual's relations with the world (Diener & Ryan, 2009). In other words, an individual has a tendency to perceive things in a positive way, and this determines the transitory interaction an individual has with the world (Diener, 1984). This implies that an individual enjoys pleasure due to his or her state of mind. Erdogan, Bauer, Truxillo, and Mansfield (2012) state that top-down theory views life satisfaction as susceptible to steady traits; meaning that people's ability to feel satisfied depends on who they are. This theoretical viewpoint assumes that there exists a global tendency to feel things in a pleasurable way.

Therefore, an individual experiences pleasure when he or she is happy (Bekhet *et al.*, 2008). This theory explains happiness and life satisfaction from the standpoint of personality and some people possess this personality trait more than others, which in turn influences the way they react to events (Diener, 1984). But this approach fails to account for events (social recognition, birth of one's first child etc) which are considered as valuable to happiness and life satisfaction in Africa; rather the theory just assumed that people have innate propensity to be happy. This theory helps to unfold the concepts of happiness and life satisfaction; because people have this innate tendency to be happy irrespective of the situation they find themselves (Bekhet *et al.* 2008; Erdogan *et al.* 2012).

2.3.2 Bottom-up Theories

Diener (1984) asserts that a person judges whether he or she is happy by adding his or her momentary pleasures and pains. Furthermore, both pleasant and unpleasant moments which comprise an individual's life are added together in a bid to generate the individual's perceived subjective wellbeing, and the more positive moments a person has had, the more his level of wellbeing rises (Diener & Ryan, 2009). According to Headey and Wearing (1989), pleasant and unpleasant life events are responsible for changes in happiness. Therefore, this standpoint suggests that happiness is the addition of many little pleasures (Diener, 1984). The theory also regards life satisfaction as how well an individual evaluates himself/herself in different life domains (Heller, Watson, & Ilies, 2004; Pavot & Diener, 2008). Some of these life domains are work, family health, and leisure.

The theory emphasises the role of life events which varies across cultures; because people differ in the value attached to these life events (Erdogan *et al.* 2012). Some people draw life satisfaction primarily from leisure, others see family and social relationship to be most

important. Therefore, satisfaction with the domains that are in consonance with one's orientation has been found to be relatively important to one's life satisfaction (Oishi *et al.* 1999). Nonetheless, some people possess capacity to enjoy even in the face of adversity. For instance, people who live in impoverished areas scored above neutral point in wellbeing scale (Biswas-Diener, Vitterso, and Diener, 2005), yet bottom up theories do not take care of people in such category rather bottom up theories only lay emphasis on life events as the key to subjective wellbeing. One of the key contributions of the theory to this discourse is peoples' experiences are fundamental to the understanding of happiness and life satisfaction (Erdogan *et al.* 2012).

2.3.3 Hedonic Treadmill Theory

Brickman and Campbell (1971) proposed that people briefly respond to positive and negative events, but in a short while they go back to their prior level. Hence, happiness and unhappiness are temporary adaptations to changes in people's conditions, since new goals repeatedly arrest individual's attention; one continuously strives to be happy without knowing that in the long run such efforts are in vain (Diener, Lucas, & Scollon, 2006).

The hedonic treadmill theory is based on an automatic habituation model in which psychological systems act in response to variation from one's present adaptation level (Diener *et al.* 2006; Helson, 1948; 1964). Automatic habituation processes are adaptive because they allow constant stimuli to disappear into the background. Hence, resources remain accessible to deal with new ideals, which are most likely to necessitate utmost attention (Fredrick & Loewenstein, 1999). The happiness method is thus hypothesised to show variation in conditions rather than in the general desirability of such circumstances. The hedonic treadmill theory suggests that no matter what we do, we cannot go beyond a certain level of satisfaction; meaning that the probability of creating greater happiness for people is very limited (Veenhoven, 2006). The

theory underestimates the power of external factors on happiness and life satisfaction (Aydin, 2012). The theory offers no explanation as to why we are happy or satisfied with life; rather it simply points to a biological habituation process that determines our level of happiness or level of life satisfaction (Aydin, 2012). Also, Diener, Lucas and Scollon (1996) show that wellbeing set point can change under some conditions and cultural differences. The major contribution of this theory is that it assumes that people are equally happy regardless of their lives circumstances. Researches (Diener, Suh, & Oishi, 1997; Frey and Stutzer, 2000a) have shown that people's level of satisfaction in life does not change with regards to internal or external factors.

2.3.4 Affect Theory

Affect theory conceptualises happiness as an emotion influenced by the personal evaluation of how we feel after a whole thing has been considered. Affect theory advocates that we calculate the balance of positive and negative events based on an estimate of incidence and duration (Aydin, 2012). The theory states further that this calculation occurs involuntarily and it is a reflection of the individual's active state of mind (Veenhoven, 2006). Affect theory contends that satisfaction of needs and wants are the determining factors underlying our happiness (Aydin, 2012). The theory explains happiness and life satisfaction from the standpoint of need satisfaction which means we are happy, when we are able to meet all our needs at any point in time (Aydin, 2012). However, affect theory does not explain "wants" which are based on collective beliefs and vary across culture (Rojas & Veenhoven, 2013). According to Rojas and Veenhoven (2013) wants are acquired and their satisfaction depends on the standards set by the society. The implication of this theory to the study is that human needs can be general but our wants may differ. Aydin (2012) contends that affect theory views happiness as a positive emotion that shows an assessment of how an individual feels. Nonetheless, the theory does not

really capture the qualitative aspect of life experiences meaning it does state what constitute good or satisfied life (Aydin, 2012).

2.3.5 Hedonic and Eudaimonic Aspect of Happiness

In the literature, two perceptions of happiness exist. They are hedonic and eudaimonic views (Ryan, Huta, & Deci, 2008). Although these perspectives are independent of each other, they are sometimes similar (Field & Buitendach, 2011). The hedonic perception explains happiness from the stand point of an individual trying to optimise pleasure and reduce pain to its barest minimum. Happiness is achieved by constantly pursuing pleasure (Peterson, Park & Seligman, 2005). Scholars in this area opine that happiness is not limited to material pleasure rather it can come from accomplishment of goals and other value outcomes (Ryan & Deci, 2001).

On the other hand, eudaimonic happiness comes from being able to identify and living by one's virtue (Ryan & Deci, 2001). The eudaimonic perspective views happiness beyond experiencing pleasure to living in conformity with one's ideal self (daimon). Here, happiness is seen as a process rather than a state as in the case of hedonic (Field & Buitendach, 2011). This implies that the eudaimonic approach might not bring instant satisfaction but it can enhance happiness (Ryan & Deci, 2001). Ryan *et al.* (2008) contend that hedonic thinking is susceptible to short-term happiness while eudaimonic living leads to a more stable and permanent happiness. Eudaimonic also refers to people's ways of life as well as their lifestyles that precise quantifiable outcomes cannot describe.

2.4 Summary of Theoretical Background and Theoretical Perspectives

Self determination theory propounded by Deci and Ryan (1985a) states that people must satisfy three fundamental psychological needs (autonomy, competence and relatedness) in order

to have a sense of happiness in their entire lives. This theory implies that subjective wellbeing depends on the extent to which people are able to meet these psychological needs within their social environment. Happiness and life satisfaction result from people's ability to achieve the desire outcome coupled with various challenges posed by the environment. Need theories centre on the premise that individuals have an urge to fulfil or achieve a need (Redmond, 2010). Maslow (1970) arranged these needs in a hierarchical order (lower and higher order). Gratification of higher order needs leads to happiness and life satisfaction which is subject to good environmental conditions (family, societal norms, economic condition, political, education etc).

Broaden and build theory of positive emotions emphasises the role of personal experiences in predicting values outcomes which are indices of happiness and life satisfaction. The implication of this theory is that happiness and life satisfaction are built from an individual's repertoire of positive experiences. Researchers such as Hervas and Vazquez (2013), Moghnie and Kazarian (2011) agree with the notion that happiness and life satisfaction are culture specific and experiences are relative to individuals which are subject to individual's cultural norms. Therefore, the existing scales are designed to suit the cultural context for which they are designed and may not be relevant in another context.

Telic theory states that subjective wellbeing is attained when one reaches his or her goals and needs. The paths to subjective wellbeing are not generic; rather they depend on an individual's values and desire. Our goals are pathways to happiness and life satisfaction which are functions of societal values and norms. Botha and Booysen (2013), Oishi *et al.* (1999), and Oishi and Diener (2001a) and affirm that achieving esteem needs (marriage, having children, social recognition), social harmony with family members and friends are sources of happiness and life satisfaction and these vary across cultures.

Social comparison theory by Festinger (1954) states that an individual compares himself with others in order to evaluate his behaviour, verify his actions and feel better about his decisions or place in society thereby attaining happiness and life satisfaction. Consequently, Gundelach and Kreiner (2004) state that happiness as a construct is influenced by two variables; these are country of residence and a stable relationship. This means that each society has its own values that individuals living in such a society use as a basis for comparison to ascertain their level of happiness and life satisfaction. Hence, the scale for measuring happiness and life satisfaction must be sensitive to these factors mentioned above.

The item response theory is a theory for designing, analysing, and scoring of tests, which thereby provides a platform for the test developer to assess the features of the test, and determine the ability of the proposed test takers. It also affords the developer the opportunity to examine how well a test and each item in the test performs. Classical test theory focuses on the relationship between three sets of score (observed, true and error scores). The consistency of any test depends on how well the test developer is able to reduce the error variance arising from the test score. The decision theory model looks at the discriminatory function of a test because test takers vary in their human characteristics and a good test should be able to discriminate between these characteristics. A norm is the average performance measure of a normative group on a scale. A normative group is usually a representative of the intended beneficiary of a scale that shares common characteristics with the entire population.

The top-down theories state that an individual is endowed with capacity to perceive things in a pleasant mode and this affects his interaction with the outside world. Top-down theories explain happiness and life satisfaction from a personality point of view and individual possesses this personality trait, while bottom-up theories see happiness as an aggregate between pleasures and pain. These pleasant and unpleasant life events are responsible for variations in our

happiness. The hedonic treadmill theory asserts that people always act in response to positive and negative events and after some time they will return to their baseline. It means that happiness and unhappiness are short-term reactions to variation in our lives. The theory is also based on an involuntary habituation system that restores an individual back to his former state. Affect theory sees happiness as a feeling that is influenced by our personal evaluation of how we feel after taking a whole lot of things into consideration. The process of gratifying our desires and wishes is the determinant of happiness. Happiness has two perceptions which are hedonic and eudaimonic (Ryan, *et al.*, 2008). Hedonic perception describes happiness as arising from the fact that the individual tries to maximise pleasure and minimise pain, and eudaimonic states that happiness comes from one being able to identify and live by his virtue (Ryan & Deci, 2001). Eudaimonic is a process rather than a state as is the case with hedonic (Field & Buitendach, 2011). According to Ryan *et al.* (2008) the hedonic view of happiness is short-term while the eudaimonic view of happiness is long-term.

Lastly, various theories have explained happiness and life satisfaction from different perspectives, each of these theories offers a unique way of achieving these concepts (Mahon & Yarcheski, 2002). Nevertheless, the study will be anchored on the self determination theory by Deci and Ryan (1985a). The theory states that people must satisfy three fundamental psychological needs (autonomy, competence and relatedness) within their immediate social environment. In other words, people can only experience happiness and life satisfaction in their lives when they have met their needs for autonomy, competence and relatedness (Gagne & Deci, 2005). Individuals must contend with various challenges within their social environment in their quest to gratify these needs. This social environment differs from one region to the other and the measuring instruments must be cognisance of the differences before it could be used to measure subjective wellbeing across cultures.

CHAPTER THREE

REVIEW OF RELATED EMPIRICAL STUDIES AND HYPOTHESES

Subjective wellbeing has been a major concern to researchers who wanted to measure people's quality of life (Campbell, 1976). Subjective wellbeing includes pleasant events and is not devoid of unpleasant factors as it is for most of the measures of mental health (Diener, 1984). Subjective wellbeing measures include an overall evaluation of all aspects of an individual's life (Diener, 1984). Scales on subjective wellbeing have been developed in the past, mostly by researchers in the developed world. This study will review some of these happiness and life satisfaction measures under the following headings: Single item scales; Scales for a specific population; Scales for a general population.

3.1.1 Review of Single Item Scales

The first scale that will be reviewed in this category is the self anchoring ladder scale by Cantril (1965). It is a single item scale where the respondent is expected to tick one of the nine rungs of a ladder provided in the scale which ranges from “best of life for you” at the top of the ladder to “worst possible life for you” at the bottom of the ladder. One of the advantages of a single item scale of subjective wellbeing is brevity because the item of the scale summarises the whole essence of the construct that it is measuring. But researchers have criticised single item scales because it is impossible to obtain an estimate of their reliability. Also it is not easy to separate the true score from error score when there is a change in measurement. It is also less reliable over time due to its temporal reliability (Diener, 1984).

The Guring happiness scale is another single item scale by Guring, Veroff, and Feld (1960). Respondents are expected to answer a question posed in the scale which is “how things are these days” with the response format ranges from “very happy”, “pretty happy” and “not too

happy”. The scale is not reliable over time as well as not being able to notice changes in the scores.

Fordyce (1977) developed a single item scale called happiness measure. Respondents are asked to value the percentage of time they are happy, unhappy, and neutral. There are 11 response choices that are graphically linked with a sequence of mood adjectives. For instance, the highest choice is linked with “feeling extremely happy, ecstatic, joyous, and fantastic”.

The Delighted-Terrible scale was developed by Andrews and Withey (1976); respondents are asked to answer the question “how happy you feel about how happy you are” by choosing one out of the seven responses ranging from “delighted” to “terrible”. This suffers from the same criticism as any other single item scale. This present study attempts to develop a multi item scale that would have a stable reliability value and that would enable the researchers to notice and separate measurement error from the actual change in the score of respondents.

3.1.2 Review of Scales for Specific Populations

The first scale to be considered under this heading is the Philadelphia geriatric centre morale scale by Lawton (1975); it is a 17 item scale measuring loneliness dissatisfaction, agitation and attitude towards one’s aging. The scale is specifically for older respondents because many of the items in the scale are related to age and time of life. Therefore, it is not suitable for young and middle-aged or young adult respondents (Diener, 1984). This makes the scale internally valid for older populations but lack external validity for the general population. Also, some items in the scale are not related to subjective wellbeing (George, 1979; Larson, 1978).

The Life satisfaction index developed by Neugarten, Havighurst, and Tobin (1961) measures four factors; these are zest vs apathy, resolution, fortitude, and congruence between

desired and achieved goals. The scale is meant for older populations and is not suitable for both young and middle-aged populations. Although, it possessed internal validity it cannot be generalised to younger populations. Life satisfaction index Z was developed by Wood, Wylie, and Sheafor (1969). This is a revised version of the Life satisfaction index by Neugarten *et al.* (1961) which consists of 13 items for an older population and it has items that are not related to subjective wellbeing and the external validity is in doubt as well.

Kozma and Stones (1980) developed the Memorial University of Newfoundland scale of happiness (MUNSH) to measure happiness among older respondents. The scale was designed to measure both short and long term aspects of wellbeing. It consists of 24 items measuring both affect and experiences (positive and negative). 10 items are measuring affect (5 positive affects and 5 negative affects). The remaining 14 items are measuring experiences (7 positive experiences and 7 negative experiences). The scaling method adopted is “Yes” or “No” format. Aside from the fact that MUNSH is specifically for older respondents, there are issues regarding the dichotomous response format which makes scores on the items to be unbalanced and lead to distorted correlational results (Comrey, 1988; Clark & Watson 1995). Although the principal components analysis yielded one bipolar factor, this bipolar is not in agreement with satisfaction, morale and affect (Bekhet *et al.* 2008).

3.1.3 Review of Scales for General Populations

Tellegen (1979) developed the Differential Personality Questionnaire (wellbeing subscale). The scale measures different personality types ranging from a combination of positive affect, positive attitudes to optimism. The wellbeing subscale comprises 21 items with true or false as its response format. Though the scale is for the general population, which makes the scale to possess internal and external validities, but the true or false response format can lead to

distorted correlational results through the unbalanced score (Clark & Watson 1995; Comrey, 1988).

The Index General Affect scale was developed by Campbell, Converse, and Rodgers (1976). It is an 8 item scale which comprises a semantic differential type scale. Subjects rate their lives in general along the dimensions of the scale ranging from enjoyable-miserable, interesting-boring and worthwhile-useless etc. Larsen, Diener, and Emmons (1985) used the principle of axis factor analysis to evaluate the interrelation and discriminant validity of Index general affect scale; the result showed that the scale loaded on the factor 1 but the researcher did not use confirmatory factor analysis as recommended by Clark and Watson (1995).

The mood survey was developed by Underwood and Frooming (1980). It is a 18 item scale with a 6 point Likert scale format, which ranges from strongly agree to strongly disagree. The scale measures three dimensions of mood: average level of a person's mood, intensity with which the individual reacts, and frequency of mood experience. The scale was factor analysed, which revealed two subscales: mood level and reactivity. Bekhet *et al.* (2008) assert that there is no evidence of coefficient of alpha for this instrument. This implies that there is no evidence that the items of the instrument are interrelated.

Another existing scale on general wellbeing is the General Wellbeing Schedule by Dupuy (1978). The instrument measures seven specific aspects of wellbeing: energy level, depressed mood, coping, person-environment fit, life satisfaction, health concerns, and stress. Each of these aspects of wellbeing has a different response format. The total number of items in the scale is 25 items with 32 corresponding responses. The problem with this scale is inconsistency in the arrangement of the items as well as the response format which makes scoring of the scale rather cumbersome (Diener, 1984).

Bradburn and Caplovitz (1965) designed a 10 item Affect Balance Scale (5 positive items and 5 negative items) with true or false response format. The scale is scored by deducting the score of negative items from the score of positive items with an additional figure of 5 points, which is constant, in order to avoid a negative value. The Affect Balance Scale (ABS) was found to have a major weakness as an instrument for measuring psychological wellbeing (Bekhet *et al.*, 2008; Kozma, Stones, & McNeil, 1991). The reliability coefficient of alpha was below 0.65 for the scale, which implies a very low internal consistency (Bekhet *et al.*, 2008). ABS also has a low correlation with other measures of wellbeing; that is, it has a low convergent validity where higher correlation is expected (Bekhet *et al.*, 2008).

The Oxford Happiness Inventory was designed by Argyle, Martin, and Crossland (1989). The scale followed the plan and format of Beck depression inventory; each item is presented in 4 incremental levels numbering from 0 to 3. The scale consists of 29 items. In determining the construct validity, Factor analysis was not conducted for the Oxford Happiness Inventory. This creates a gap in the analysis of this scale validation and development.

The Chinese Happiness Inventory was developed by Lu and Shih (1997); the CHI was based on the Oxford Happiness Inventory. The CHI consists of 48 items; 20 items were derived from a qualitative study conducted in Taiwan (Behket *et al.* 2008) and 28 items taken from the OHI. The scale has a response format that ranges from 0 to 3 with the higher the score the higher the happiness. Just like the Oxford Happiness Inventory, factor analysis was not computed to determine the structural validity of the Chinese Happiness Inventory.

Hills and Argyle (2002) constructed the 29 item Oxford Happiness Questionnaire (OHQ) as a superior version of the Oxford Happiness Inventory by Argyle *et al.* (1989). The OHQ has a 6 point response format which ranges from 1 strongly disagree to 6 strongly agree. The items of

the OHQ include 20 items from the OHI with an additional 9 items. Rather than evaluating the structure of subjective wellbeing, the items in OHQ tap other personality variables such as self esteem, sense of purpose, social interest and kindness, sense of humour, and aesthetic appreciation. The items of this scale fail to discriminate between subjective wellbeing and other correlates, predictors and consequences of subjective wellbeing (Kashdan, 2004). Kashdan (2004) concludes that the operationalisation of subjective wellbeing is not based on relevant theory and definition; it seems to have introduced non-random error into the study of subjective wellbeing.

Lyubomirsky and Lepper (1999) constructed the Subjective Happiness Scale; it is a 4 item scale, which is precise, reliable, and valid. The scale was developed so as not to overburden the respondents or to jeopardise the uni-dimensional structure of happiness with many items (Behket *et al.*, 2008). The scale has a 7 point response format ranges from 1 “not very happy person” to 7 “very happy person”. As rightly noted by Clark and Watson (1995), giving more response alternatives does not improve reliability or validity of a scale; rather it may reduce validity of such scale if respondents cannot make the distinctions that are required. The implication of this is that having too many options can cause an element of arbitrary answering that renders scores on the scale to be invalid. They called for the use of a 5 point Likert scale format. Again, the standardisation sample used in establishing the construct validity is faulty; this is because the developers used retirees as the standardisation sample while the scale is meant for the general population. The standardisation sample should have included young and middle-age as well as older populations.

The Marital Happiness Scale was designed by Azrin, Naster, and Jones (1973) to provide an instrument for measuring marital happiness in the ten fields of marital interaction: rearing of children, money, household responsibilities, occupational progress, social activities, academic or

personal independence, sex, communication, and spouse independence. The scale has 10 items with each item measuring one of the ten areas of marital interactions. Each item is scored on a continuum ranging from 1 “completely unhappy” to 10 “completely happy”. The alternatives provided in this scale are too many; this can cause an element of haphazard responding that renders scores invalid (Clark & Watson, 1995).

The Pemberton Happiness Index was developed by Hervas and Vazquez (2013); the scale is partitioned into 2 parts. The first part consists of 11 items which are centred on various domains of remembered wellbeing (general, hedonic, eudaimonic, and social wellbeing) and 10 items centred to experienced wellbeing (i.e. good and bad events that happened the previous day). Section A has a continuum ranging from 0 “total disagree” to 10 “total agree” as the response format, while items in section B are provided with “Yes or No” as the response format. Section A of the scale has a defect regarding the alternatives provided in the response format which tends to render the scores on the scale less valid. Also, section B has “Yes or No” as its response format which has been heavily criticised by Comrey (1988) who argued that multiple choice response formats are more reliable, give steady results and produce better scales, unlike the dichotomous format that can lead to distorted correctional results (Clark & Watson, 1995).

The Steen Happiness Index was developed by Seligman, Steen, Park, and Peterson, (2005). The scale consists of 20 items with a series of statements that requires participants to read and tick one statement that best describe them during the past one week. The responses format ranges from a negative (Most of the time I am bored) with a corresponding value of 1 point to an extreme positive (Most of the time, I am fascinated by what I am doing) with a corresponding value of 5 points. The items cover the areas of pleasure, engagement and meaning. The total score is the addition of each individual item of the scale. The scale did not

capture the contribution of a third party to an individual happiness rather the scale treated happiness as the outcome of an individual's effort.

Krapu, Meinke, Kramer, Friedman, and Voda (2006) developed the Life Satisfaction Scale for professional life coaches. The instrument has 6 subscales with 86 items in all. They are Life satisfaction/motivation (31 items), positive emotions/self control (20 items), interpersonal confidence (11 items), good concentration and freedom from self-limiting beliefs (15 items), diet and exercise (5 items), and sleep quality (4 items). A five point Likert scale was used to enable respondents to rate the degree to which each statement was "like me". The life satisfaction scale was designed to assist life coaches to get insight into different aspects of a client's life. This is of one the reasons why they incorporated other behavioural problem in the development of the scale. Although factor analysis was used to determine the dimensions of the scale but it was used to establish whether the items in each subscale are related. This can be done by calculating item-total correlation for each of the six subscales in order to delete items that did not measure strongly with the concept under consideration (Clark & Watson, 1995). But this was not done which cast a serious doubt on the items that made up each of the subscales. Also the instruction given on how to respond to the instrument is not clear enough.

The Life Happiness Scale by Chan (2011) comprises 5 items with a 7 point scale Likert format. The scores obtained in each item are summed together to arrive at the total score for the respondents. The total score ranges from 5 to 35. The test developer adopted a 7 point response format which was criticised by Clark and Watson (1995), that giving more response alternatives may not improve reliability or validity of a scale, rather it may reduce the validity of such a scale if respondents are not able to make the required distinctions. The implication of this is that having too many response options can lead to random responding, which makes test scores to be invalid; a 5 point response format was recommended.

The Satisfaction With Life Scale by Diener *et al.* (1985) is the most commonly used and SWLS has different versions in various languages. SWLS is a 5 item scale with a 7 point Likert response format. SWLS is regarded as a unidimensional scale which was arrived at by conducting exploratory factor analysis. This method negates the principle of unidimensionality as canvassed by Gerbing and Anderson (1988), that item-total correlation and exploratory factor analysis can provide useful initial analyses, particularly in the absence of adequate theory. The two analyses are inadequate to determine unidimension of a scale. The reason is that a confirmatory factor analysis (CFA) can only determine the internal and external consistencies criteria of unidimension of a scale. This means that SWLS cannot be regarded as a unidimensional scale because CFA was not used to assess its dimensionality. Also, scholars have argued that four out of the five items are useful in measuring life satisfaction in their sample used in their study (Hultell & Gustavsson, 2008; Maluka & Grieve, 2008; Westway & Maluka, 2005).

3.1.4 Review of Methods Used to Validate Some of the Existing Scales

Bohrnstedt (1983) explained the significance of determining the reliability and validity of an instrument; these concepts are important because they are means through which one can establish utility of a scale. It is against this background that scale developers adopted various methods of establishing both reliability and validity of a scale. There has been consensus among scale developers on methods of establishing reliability but the most widely used is the internal consistency (Clark & Watson, 1995). Scholars such as Dogan, Tugut, and Golbasi (2013); Hervas and Vazquez (2013); Oladipo and Balogun (2011); Raubenheimer (2004); Ungerer and Strasheim (2011); Westaway and Maluka (2005); Westaway and Myburgh (2007) all used an internal consistency method of reliability in their respective research either in the construction of a new scale or revalidating an existing scale. For instance, Hervas and Vazquez (2013) established internal consistency in their work titled "Construction and validation of a measure of

integrative wellbeing in seven languages: The Pemberton Happiness Index”. Oladipo and Balogun (2011) also used internal consistency when they were revalidating Satisfaction With Life Scale by Diener *et al.* (1985) among adolescents in Nigeria.

There are several methods of establishing the validity of a scale which range from face, content, discriminant, convergent, and structural validities. The face and content validities were established during the process of item generation for the proposed scale, which was part of test development process following the procedures set by Clark and Watson’s (1995) scale development guidelines. Discriminant validity refers to the idea that a scale should not show a relationship with a scale measuring other constructs (Diener, Ingehart, & Tay, 2012). In practice, discriminant validity means that a scale correlates high with other scales measuring the same concept and correlate low with scales measuring different concepts (Diener *et al.*, 2012). Besides, a scale should depict a distinct pattern of correlations with external variables. Abdel-Khalek (2004) asserts that considerable research has focussed on the relation of psychological distress and wellbeing or health (Masse, Poulin, Dasa, Lambert, Belair, & Battaglini, 1998; Wilkinson & Walford, 1998).

Therefore a negative correlation was expected between anxiety and happiness. Lucas, Diener, and Suh (1996), and Pavot and Diener (1993a) established discriminant validity by comparing scores on the Satisfaction With Life Scale (SWLS) with scores on external constructs. Abdel-Khalek (2004) utilized a three stage approach and correlated the Kuwait University anxiety scale with self rated happiness scale among 2,584 secondary school students. Abdel-Khalek’s (2004) study shows a negative relationship between happiness and anxiety. Abdel-Khalek (2004) used adolescents as the participants in his study; this therefore limits the external validity of his study. Diener *et al.* (1985) also used a three phase approach and correlated the scores on Satisfaction With Life Scale with scores on the neuroticism scale by

Eysenck and Eysenck (1964), symptom checklist by Derogatis, Lipman Rickels, and Covi (1974), emotionality and impulsivity scale in Buss and Plomin's (1975) survey of the temperaments (EASI-III) among 163 undergraduate students. Diener *et al.* (1985) report a negative correlation between scores on Satisfaction With Life Scale and scores on neuroticism, symptom checklist, emotionality and impulsivity just like the present study. The study of Diener *et al.* (1985) was not robust enough because it consists of only undergraduates.

Another method of assessing the validity of a scale is the convergent validity method. Convergent validity is defined as the correlation between scales that measure the same concept though assessed by varying methods (Guo, Aveyard, Fielding & Sutton, 2008). Consequently, different scales measuring the same trait should correlate highly with each other but should correlate less strongly with scales measuring different traits (Widaman, 1985). Scholars (Diener *et al.*, 1985) established convergent validity by correlating score on the Satisfaction With Life Scale (SWLS) with other existing scales that measure either happiness or life satisfaction. Also, Lucas *et al.* (1996); Pavot, Diener, Randall Colvin, and Sandvik (1991); and Pavot and Diener (1993a) all assessed convergent validity by comparing SWLS with other related scales. Van Beuningen's (2012) study used the Dutch version of the Satisfaction With Life Scale with 3,402 respondents. The study was designed in four stages and the Dutch version of SWLS was compared with a single item scale of global life satisfaction to establish the convergent validity. The problem associated with Van Beuningen's (2012) study is that the convergent validity was obtained by correlating the Dutch version with a single item scale which has been criticised for lacking reliability.

Hervas and Vazquez (2013) report that the Pemberton Happiness Index depicted a steady format of correlations with other related scales that cover different aspects of wellbeing which range from the Satisfaction With Life Scale by Diener *et al.* (1985), Subjective Happiness Scale

by Lyubomirsky and Lepper (1999) and Satisfaction with Domain of Life by Pavot and Diener (2008). The Pemberton Happiness Index was positively correlated with all the domains of wellbeing. The standardisation sample for the study was drawn from America (USA & Mexico), Europe (Spain, Germany, Sweden & Russia) and Asia (Turkey, India & Japan) with the total number of 4,407 participants. The sample was heterogenous and robust with sex, socioeconomic status, educational level, religious affiliation as characteristics of the sample. The sample did not include Africans therefore one cannot extend the result of the study to Africa. Kaczmarek, Stanko-Kaczmarek, and Dombrowski (2010) reported convergence validity between the Steen Happiness Index (SHI) and the Polish version of the Steen Happiness Index (SHI-PL). They divided the research into three stages with 8 participants for study one, 456 for study two and 40 for study three. The participants were undergraduates with the age range from 18 years to 37 years. Although convergent validity was established, the sample did not include older respondents who are part of the population.

Given the uncertainty in the internal consistency estimation as a method of deciding whether a scale is unidimensional (a situation where all the items in a scale are measuring the similar concept) or multidimensional (Clark & Watson, 1995), the coefficient of alpha has been misinterpreted as index of unidimensionality rather than reliability (Gerbing & Anderson, 1988). Consequently, test developers are advised to do factor analysis of their scale in order to establish the factor loading of the scale items. Factor analysis plays a vital function in determining the discriminant validity of the scale. Exploratory factor analysis (EFA) is suitable because the analysis allows the researcher to have direct access to the total pattern of loadings and it is also sensitive to error in factor loading (Raubenheimer, 2004).

Therefore, researchers (Diener *et al.*, 1995; Hervas and Vazquez, 2013; Ibem & Amole, 2013; Krapu *et al.*, 2006; Mahadea, 2013; Moghnie & Kazarian, 2011; Oladipo & Balogun,

2011; Van Beuningen, 2012; Westaway & Maluka, 2005; Westaway, Maritz, & Golele 2003; Westaway & Myburgh, 2007) have used this EFA as a method for assessing the structural validity of their scale. Krapu *et al.* (2006) developed and standardised a life satisfaction survey scale, using 286 participants with age range from 19 years – 79 years. The EFA yielded six factors. Apart from the EFA, item analysis and convergent and discriminant validities were not calculated although the coefficient of stability was established for the new scale. This cast doubt on the items that make up the scale because the usefulness and contribution of each item were not determined. Mahadea (2013) in his study used 220 South Africans which consisted of black, Indian, white and coloured. The EFA yielded 7 components but the problem associated with this study is that a single item was used to collect the data. A single item scale has been found to have a temporal reliability coefficient. Despite the advantages of EFA, the analysis lacks statistical sophistication to measure unidimensionality of scales. It is only the confirmatory factor analysis (CFA) which can assess both the internal and external consistency criteria of unidimensionality (Gerbing & Anderson, 1988). The CFA is also better because standard errors can be calculated in the analysis, whereas standard statistical packages do not permit calculation of standard errors in EFA.

As a result of these advantages of CFA, Chen, Tsai, and Chen (2010), Dogan *et al.* (2013), Elgar, Davis, Wohl, Trites, Zelenski, Martin, (2011), Henderson, Knight, and Richardson (2014), Hultell and Gustavsson (2008), Joshanloo (2013), Kaczmarek *et al.* (2010), Koydemir, Simsek, Schutz, Tipandjan (2013), Patterson, Dulmus, Maguin, and Fava (2014), and Yu and Hsu (2013) used CFA in their studies. Hultell and Gustavsson's (2008) sample consisted of 2,966 student teachers who participated in a study that aimed to revalidate satisfaction with life scale among Swedes. The result of the CFA showed a unidimensional model fit. One of the problems of this study was the composition of the sample used in the study which was mainly

student teachers. Yu and Hsu (2013) adopted a 3-stage approach in the validation of cyberspace positive psychology scale. A total number of 411 college students were sampled from 4 Universities in Taiwan. The results showed a good fit model. But the CFA has its flaws according to Thompson (1997), who reported that researchers using CFA often neglected to study the entire factor pattern and structure – a practice that could lead to important information being left out while analysing the items of the scale. This makes EFA better than CFA in a situation where a researcher wants to analyse the usefulness of each item. However, Clark and Watson (1995) have recommended the use of both EFA and CFA because the two analyses are complementary. Gerbing and Hamilton (1996) advocate the use of EFA as a precursor to further investigation of factor structure. In furtherance of this, Simsek and Kocayoruk (2013), Ojedokun (2015), Ojedokun (2016) and Wissing, Thekiso, Stapelberg, Quickelberge, Choabi, Moroeng, Nienaber, Temane, and Vorster (2010), and adopted this strategy of using the two analyses together. Moss, Lawson, White and the Appearance Research Collaboration (2015) selected two categories of participants (614 community participants and 651 clinical participants). Community participants were selected from advertisements and people who are attending general practice doctors' surgeries. The clinical participants were selected from the community and through outpatient clinics from various locations across the United Kingdom. EFA and CFA were used to analyse the data collected in the study. Since the study was conducted in the United Kingdom, the results cannot be applied to Africa. Wissing *et al.* (2010) utilised EFA and CFA to validate three Setswana measures of psychological wellbeing using a two-stage method and the participants ages ranged from 15 to 65 years. The findings are limited only to Setswana and therefore lack generalisation.

This study would bridge the gaps highlighted in all the existing scales that were reviewed above, as well as methods adopted in previous researches, by developing a multi-item scale with

a formal of relatively few responses (five points), that would be suitable for all adults with strict adherence to processes involved in the development and validation of a new scale. It would also address the gaps discovered in the methods adopted in the studies stated above by applying both EFA and CFA with structural equation modelling. Above all, the scale would be in line with Africans' definition of happiness and life satisfaction. Another contribution to the body of knowledge is both happiness and life satisfaction would be subscales in the new instrument.

Another point that has been raised is the differences in culture where most of the existing scale were developed and can also contribute to why they are not suitable for Africans. Scholars (Clark & Watson, 2005; Oishi *et al.* 1999; Pflug, 2009; Rodrigues-Mosquera & Imada, 2013;) have written much on these differences.

3.2.1 Cultural Differences, Environment and Subjective Wellbeing

The available literature compares the level of happiness and life satisfaction of Africans with that of Europeans and North Americans using scales that are not sensitive to the essence of happiness and life satisfaction of Africans. This implies that what constitutes happiness and life satisfaction varies widely across cultures. In one culture, being independent or thinking about oneself is the most important source of wellbeing while maintaining harmony in relationships and being cooperative is the most important source of wellbeing in another culture (Rodrigues-Mosquera & Imada, 2013).

Therefore, Africans seem to define happiness and life satisfaction in relation to social harmony and tight family relationships as opposed to Europeans who see happiness and life satisfaction in relation to free will, independence and hedonic pleasure (Pflug, 2009). Similarly, Oishi *et al.* (1999) opine that the standard for life satisfaction judgements differ across cultures and such variations are linked to cultural ideals. Similarly, Ibem and Amole (2013) contend that

what determines subjective life satisfaction differs between persons and may include health conditions, emotions, norms, personal characteristics, and culture, among several other factors.

Furthermore, distinctions have been made between individualistic cultures and collectivistic cultures. In collectivistic societies, the focus is on the group while in individualistic cultures emphasis is placed on the individual (Eaton & Louw, 2000). In the same vein, self is seen as an autonomous entity and behaviour is entrenched in the distinctive qualities of the self. This makes independence, distinctiveness and self-esteem to be extremely valued traits in developed societies (Kitayama & Markus, 2000; Triandis, 1995) as against collectivistic cultures that are based in Asia and Africa, where agreement and self-critical attitudes are culturally approved values (Morling, Kitayama, & Miyamoto, 2002; Ohbuchi & Takahashi, 1994).

Similarly, some traits are consistently related to subjective wellbeing in the individualistic culture as compared to the collectivistic culture. For instance, self esteem, identity consistency, autonomy, personal goals, extraversion and neuroticism have been found to be related to life satisfaction in individualistic cultures (Benet-Martinez & Karakitapoghu-Aygun, 2003; Diener & Diener, 1995; Oishi, Dzokoto, & Ahadi, 2002; Suh, 2002; Schimmack, Radhakrishnan).

By contrast, collectivistic cultures emphasise interdependence, connectedness with others and harmony (Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994). According to Rodrigues-Mosquera and Imada (2013) life satisfaction has a more relational basis in collectivistic cultures. Oishi, Diener, Lucas, and Suh (1999) reveal that satisfaction with self and one's freedom were related to life satisfaction in an individualistic society more than in a collectivistic society even when national wealth was controlled. Collectivists can tolerate contradictions better and can cope better with change as well as being flexible across social situations, and tend to be holistic

in their thinking as compared to individualists (Traindis and Suh, 2002; Koltko-Rivera, 2004). Hence, Koltko-Rivera (2004) asserts that a wide range of literature reveals that East Asians display “holistic” cognition which is characterised by taking note of the whole stimulus field and the use of dialectical reasoning while Americans display analytical cognition characterized by attention to one-off details and the use of Aristotelian-type logic.

Aside from that, internal variables such as emotional states and personality are the main factors responsible for life satisfaction in individualistic societies as against collectivistic societies where life satisfaction depends on both internal and external factors such as interpersonal and harmonious relationships (Diener *et al.*, 1995; Kwan, Bond, & Singelis, 1997; Suh *et al.*, 1998). In a follow-up study by Suh and Diener (2001), the result shows that perceived acceptance by parents and significant others are related to life satisfaction as well as emotions of Asian Americans, while perceived acceptance by others is not related to life satisfaction and emotions of European Americans.

People living in individualistic societies report higher life satisfaction with higher positive affect as compared to their counterparts who are living in collectivistic societies (Diener, Diener, & Diener, 1995; Kitayama & Markus, 2000). Also, Oishi and Diener (2001a) report that the nature of persons who experience positive improvements in wellbeing differs between Asian Americans and European Americans. European Americans who experience positive improvements in subjective wellbeing achieve the goals they pursued for fun and enjoyment while Asian Americans who experience positive changes in subjective wellbeing achieve the goals they pursued not for personal enjoyment but to make others happy (Diener, Oishi, & Lucas, 2003). In the same vein, Mesquita and Karasawa’s (2002) result shows that there is a direct relationship between pleasant emotions and relationships among Japanese, while pleasant emotions are directly related to self-concern among European Americans.

Pflug (2009) reveals that respondents from an individualistic society viewed happiness as a consequence of freedom, self reliance and hedonic pleasure whereas respondents from collectivistic society portrayed happiness as emanating from contentment, social harmony and strong family relationships. This is because an individual in a collectivist culture is seen as a mirror of his/her social relationship; hence society has an acceptable level of behaviour into which an individual has to fit.

Kwan *et al.* (1997) opine that harmonious relationship is a strong determinant of life satisfaction in Hong Kong as compared to the United States. Also, there exists a relationship between norms and life satisfaction in collectivist countries in comparison with individualist countries (Suh *et al.*, 1998). Furthermore, Oishi and Diener (2001b) show in their study that Asian participants experienced greater life satisfaction than European Americans did when they achieved social goals, which were characterised by making the participants' parents and friends happy.

In addition, Suh, Diener, and Updegraff (2008) report that collectivistic participants, compared to individualistic participants, were more likely to use social appraisal information when judging their life satisfaction. This social appraisal was measured by asking the participants to assess how their parents would rate their satisfaction with life. Therefore, peoples' judgement on wellbeing is shaped by the social milieu as well as cultural norms (Koydemir, Simsek, Schutz, & Tipandjan, 2013). The implication of this is that the paradigm for life satisfaction judgements varies across cultures and these variations are subject to cultural values. Ibem and Amole (2013) conclude that what determines subjective life satisfaction varies between persons and these consist of personal characteristics, emotions, health conditions, norms and culture, among several others. From the foregoing, it is clearly shown that a scale developed in the individualistic society would not be relevant in the collectivistic society.

Contrary to the above studies, Hofer, Chasiotis, and Campos (2006) show that irrespective of a person's cultural orientation and strong evaluations of values, concern for close interpersonal relationships (benevolence) is connected with higher levels of life satisfaction. The researchers anchored this association between benevolence and life satisfaction on self-determination theory. The theory states that wellbeing depends on gratification of relatedness need (Deci & Ryan, 1985). Also, Bilsky and Schwartz (1994) assert that the value attached to growth needs is positively related to subjective wellbeing when related goals are successfully achieved.

There are a growing numbers of researches that explain the differences in the subjective wellbeing from the environmental perspective. For instance, Diener and Diener (1996) find that people living in industrialised societies score above average in wellbeing surveys. But international surveys of wellbeing show considerable differences in subjective wellbeing levels between the countries used in such survey (Diener & Suh, 2000). This finding can be explained from the economic development of the countries surveyed. Also the scales used in some of these studies may not be culturally sensitive, hence the results revealed a false negative in some countries used in these studies.

There have been inconsistencies in the results of these studies as poverty was thought to have a devastating effect of wellbeing, because countries who report the lowest level of wellbeing are the poorest and least industrialised nations (Diener & Ryan, 2009). In addition, satisfaction with life is lower in nations that experienced war, inflation, and unemployment (Kacapyr, 2008). For instance, Diener, Diener, and Diener (1995) reveal great differences in subjective wellbeing between nations; these differences are associated with the average levels of income in those countries. Also, Diener and Biswas-Diener (2002) review a number of researches and report relationships in the range of 0.60 to 0.70 among the wealthy countries and

their mean levels of subjective wellbeing. According to Diener *et al.* (2003) the reason for the above finding is not far fetched because rich countries are expected to score higher on human rights, equality, longevity and democratic governance which are desirable conditions for subjective wellbeing. Kacapyr (2008) reports that nations with better health, more spirituality (as measured by the percent of the population that believes in God) and more gender sensitive are more satisfied with life.

However, Biswas-Diener, Vitterso, and Diener (2005) report that the Maasai, Amish and Inughuit cultures scored above neutral in levels of subjective well-being in spite of their relatively poor living condition. Kalyuzhnova and Kambhampati (2008) report that fewer people in the transition economies of Central Asia and Eastern Europe claimed to be happy in comparison with people in nations that are arguably poorer with considerable levels of under development in Asia, Africa and Latin America. Also, Biswas-Diener and Diener (2001) note that those living in slum housing, sex workers, and homeless pavement dwellers in Calcutta show life satisfaction a little below average level.

In line with the above findings, Diener and Biswas-Diener (2002) report that the relationship between income and subjective wellbeing is slightly lower in the developed economies. Biswas-Diener and Diener (2006) report that wellbeing among the homeless is arguably low; nevertheless homeless groups in India show higher level of life satisfaction than their counterparts in the United States, regardless of availability of food, clean water, medical care, and opportunities of employment in the United States. Diener *et al.* (1995) conclude that individualism is vital to higher levels of happiness in developed countries; however Schyns (1998) could not reach a similar conclusion.

Furthermore, Vitterso, Roysamb, and Diener (2002) opine that there is inconsistency in life satisfaction reports in poorer nations, thus the relationship between life satisfaction and per capita income of these countries diminishes when an adjustment was made for reliability. Moreover, Vitterso *et al.* (2002) found a somewhat different composition of life satisfaction across cultures. This implies that cross-cultural investigators need to examine the factor structure of their scales as well as the reliability of the scale before making a cross-cultural comparison.

In the United States, low income earners reports higher negative affect and lower life satisfaction than low income earners in Denmark (Biswas-Diener, Vitterso, & Diener, 2005). In the same vein, Blaauw and Pretorius (2013) report the highest level of wellbeing in Mpumalanga province, followed by the Northern Cape, Free State, Western Cape, Gauteng, North West, Eastern Cape, Limpopo and KwaZulu-Natal, in South Africa. It is not surprising to see that higher levels of wellbeing are reported in the more rural provinces like Mpumalanga, Northern Cape and Free State because this finding is in consonance with the above literature and other international findings.

Researchers such as Ibem and Amole (2013) and Westaway (2006) have also noted that some people rate their quality of life to be very good despite the fact that their living conditions are extremely poor, while others rate their quality of life to be very poor even though they are living in excellent housing. Kalyuzhnova and Kambhampati (2008) conclude that the trend in happiness rating across countries might reflect people's impressions about their happiness in relation to what they are familiar with and their expectations from life. Based on these expectations, people living in the developing world are, on average, happier than people living in the Transition and Emerging Economies (TEEs). Hence, people's perception of subjective wellbeing is partly determined by the broader social milieu and cultural norms (Koydemir *et al.*, 2013). These norms influence the importance that is placed on the criteria used in evaluating

subjective wellbeing (Kitayama & Markus, 2000; Suh, 2000; Uchida, Norasakkunkun, & Kitayama, 2004).

Aside from the above, scholars such as Kacapyr (2008) and Pflug (2009) have highlighted other probable reasons for cultural differences in subjective wellbeing. One of the factors highlighted in the literature is self-serving bias, which is the deviation from reality that put respondents in a favourable light more than necessary (Diener *et al.*, 2003). Self-enhancement, which is one of the self-serving biases, refers to rating oneself as somewhat better in comparison to how one rates others. This type of self-serving bias is not common among East Asians and even weak when it occurred (Heine, Tanaka, & Lehman, 2000). On the other hand, there is a self-critical tendency in self-evaluation and attribution among East Asians (Heine, Lehman, Markus, & Kitayama, 1999). Hence, cultural differences in self-enhancement may be one of the factors responsible for cultural differences in the levels of wellbeing (Diener, Oishi, & Lucas 2003).

Besides, Oishi and Diener (2001b) report that European Americans over-valued the number of anagram tasks they solved a week earlier, whereas Asian Americans under-valued the number of anagrams they solved. In another study, Oishi (2001) reports that European Americans over-valued their weekly life satisfaction judgement in comparison to their daily life satisfaction judgement during the same seven days while Asian Americans' life satisfaction for the week as a whole was almost the same as the average of their daily satisfaction judgement.

Moreover, cultural relativity in subjective wellbeing also exists in the approach versus avoidance orientation (Briley & Wyer, 2002; Lee, Aaker, & Gardner, 2000). Lee *et al.* (2000) show that the thought about one's group members, which is one of the attributes of a collectivistic society, prepared people to concentrate on negative outcomes (i.e., avoidance),

while the thought about one's self being independent, which is one of the attributes of an individualistic society, prepared people to concentrate on positive outcomes (i.e., approach). As regards subjective wellbeing, Elliot, Chirkov, Kim, and Sheldon (2001) reveal that Asian Americans, South Koreans and Russians were more avoidance goals oriented than European Americans. Diener *et al.* (2003) conclude that cultural factors such as self enhancement versus self criticism as well as approach versus avoidance goals contribute to the understanding of relativity in subjective wellbeing across countries.

3.2.2 Social Relationships, Happiness and Life Satisfaction

Moreover, there are some cultural values that Africans placed in high esteem which are relevant to the concepts of happiness and life satisfaction. These values are the parameters Africans use in determining whether one is happy or satisfied with life. In the literature, these values have been found to be determinants of happiness and life satisfaction which existing scales are not measuring. Dutt and Radcliff (2009) assert that the worth of the relationship one is having at the workplace, in the neighbourhood and in the family setting is related to individual happiness. Therefore, individuals with strong family ties, good children, supportive friends, and a good working environment are happier than individuals who lack any of these qualities. Thomas and Chambers (1989) assert that family relationships and serving the community are sources of happiness in a collectivistic culture as against control belief in an individualistic culture.

For instance, Indians are happy when they manage to fulfil their social obligations while the British are preoccupied with losing control over their life (Pflug, 2009; Thomas & Chambers, 1989). In a study conducted by Lu and Shih (1997) on perceived sources of happiness among Taiwanese, the result shows that Taiwanese place a stronger emphasis on interpersonal

evaluation and satisfaction than intrapersonal assessment. In addition, Chiasson, Dube, and Blondin (1996) asked Americans, French, Canadians and El Salvadorians questions about happiness. The result shows that respondents from North America placed more emphasis on enjoyment and personal sources of power as means to their happiness in comparison to respondents from El Salvador. Lu and Gilmour (2006) contend that family values, benevolence and harmony are of importance to people living in collectivistic cultures. In line with this, it was revealed that Germans are predisposed to a goal attainment and hedonic version of happiness whereas South Africans favoured cool and fair mental or affective states (Pflug, 2009). Also, South Africans linked happiness with tight social relationships and stable social surroundings in which everybody is comfortable (Pflug, 2009).

Although Germans valued social relationships, they define their social relationships in terms of the needs of individuals (Pflug, 2009). The German respondents were ready to affirm their personal autonomy, even if it is going to be in conflict with the interest of others while South Africans define their social relationship in terms of harmony between the individual and society (Pflug, 2009). Diener and Biswas-Diener (2008) contend that people who have a large number of friends and relatives tends to experience higher levels of subjective wellbeing, in addition, people who have higher wellbeing tend to have closer and more supportive social relationships than persons with low life satisfaction. It has also been reported that a supportive relationship is a contributing factor in high subjective wellbeing (Diener & Ryan, 2009). Kahneman and Krueger (2006) assert that people are happier when they are in the midst of people and rate social interaction as the most pleasant point in their day. At the same time, people tend to convey more positive affect when they are in company of people (Diener & Biswas-Diener, 2008). Moreover, social interaction not only increases levels of wellbeing but it

also acts as a shield to stressful events such as the demise of loved ones, rape and job loss (Myers, 1999).

Scholars such as Gundelach and Kreiner (2004), Ibem and Amole (2013), Moghnie and Kazarian (2011) and Oishi *et al.* (1999) are of the view that factors affecting subjective wellbeing are relative across nations and cultures. Layard, Mayraz, and Nickell (2009), in their contribution to the topic, criticised the evidence provided by Deaton (2008) that suggests a high positive correlation between measure of life satisfaction and standard of income measurement; they conclude that the determinants of subjective wellbeing between developed and developing nations are not the same.



However, people all over the world consider the similar parts of subjective wellbeing as essential but the global differences in subjective wellbeing are functions of different life situations particularly in the accessibility of social capital (Layard *et al.*, 2009). Diener (2000) reports that people in different countries perceive happiness differently, but at the same time they all regarded happiness and life satisfaction as vital and those in Southern American countries rated subjective wellbeing higher than respondents from other parts of the world (Diener *et al.* 2003). According to Gundelach and Kreiner (2004) happiness as a construct is influenced by two variables; these are country of residence and stable relationships.

Studies (Helliwell, 2002, 2008; Sarracino, 2013; Uhlaner, 1989) have shown that social capital is an essential determinant of people's subjective wellbeing. Gundelach and Kreiner (2004) identify two types of social network which are social capital and social ties. Social capital, according to them, is a possession of the societies. It refers to tight webs of social interactions and interpersonal dependence. Social capital is formed from horizontal ties in

society that lead to social trust and lower the cost of transaction among people. Putnam (2000) refers to social capital as a set of social relations, shared norms and values existing in a society.

The Organisation for Economic Co-operation and Development (2001) defines social capital as “networks jointly with shared norms, values and understandings that bring about cooperation within or among groups”. Gundelach and Kreiner (2004) report that social capital is the most important overall predictor of perceived happiness and people who stay in countries where social capital is strong will be more likely to show a high level of social wellbeing. Also, Sarracino (2013) reports a positive correlation between social capital and subjective wellbeing. Social ties keep an individual less lonely, better supported, more bonded and happier (Lane, 2000; Mahadea, 2013; Putman, 2001). Lane (2000) emphasises the quality of companionship in happiness which, according to the researcher, is diminishing in the developed countries.

3.2.3 Marriage, Family Life, Happiness and Life Satisfaction

In the same vein, Helliwell, Barrington-Leigh, Harris, and Huang (2009) contend that subjective wellbeing is enhanced via social bonding such as marriage and other strong social association. In line with this, Diener and Seligman (2002) report that social relations through a good family life, marriage and friendship are essential for high happiness. Mahadea (2013) asserts that life situations such as marriage, health and having children in the household make a greater contribution to happiness than income. Besides, Perkins (1991) reports that persons who prefer high income (which comes with work-related stresses), over close friendship and marriage describe themselves as unhappy. Furthermore, Layard (2011) classifies factors that determine happiness into seven categories which are arranged in order of importance; family relationship, financial situation, work, community and friends, health, personal freedom as well as values. Mahadea (2013) concludes that “life satisfaction involves more than just earnings, and happiness

can be attained with other means such as religion, education, friendship and family relationships”.

Many scholars (Botha & Booysen, 2013; Frey, 2008; Frey & Stutzer, 2000; Peiro, 2006; Vanassche, Swicegood & Matthijs, 2013) have established that married people reported higher levels of wellbeing than those who have split from their spouse, who are on their own, who have lost their spouse, and cohabiting. Waite and Gallagher (2000) argue that marriage gives financial and social stability, which is connected with better health and greater happiness. According to Gundelach and Kreiner (2004) happiness is strongly affected by social networks and social bonds such as wedlock or marriage-like relationships, and persons who are in secure relationship are susceptible to feeling more happy than single people. Also, people who have high life satisfaction before marriage are more apt than others to be married, stay married and be happy in their marriages; people who have low life satisfaction before their marriage are prone to get divorced (Lucas, Clark, Georgellis, & Diener, 2003).

Soons and Kalmijn, (2009) were curious to know whether it is marriage or the act of living together that is related to happiness, because the act of living together has the capacity to enhance the quality of life of many people (Lee & Ono, 2012). Nevertheless, Stutzer and Frey (2006) argue that marriage is directly related to individual wellbeing, in view of the fact that marriage is another way of achieving self esteem. Married people are not prone to isolation thereby having the prospect of gaining from a supportive relationship (Stutzer & Frey, 2006).

Peiro (2006) reveals that marriage showed a strong relationship with happiness and life satisfaction. That is, people who are married are happier and more satisfied than those who are single, widowed, or separated (Layard, 2006; Oswald, 1997). Botha and Booysen (2013) observe that a great deal of empirical research that investigates the correlation between marital status and

life satisfaction is carried out in developed countries. In addition, Peiro (2006) asserts that this association between marital status and happiness occurred mainly in developed countries, because the result of Peiro's study shows no significant relationship between wellbeing and marriage in six of the seven developing countries, apart from Argentina, where married individuals were significantly more satisfied than singles while individuals who are single are happier than those who are married in Chile, Nigeria and Peru.

The result from Peiro's (2006) study may be due to the fact that the items of the scale used in collecting the data were not in line with what respondents from developing countries term as happiness, hence the result was low. On the contrary, Diener, Gohm, Suh, and Oishi (2000) use individual level figures from the World Values Survey collected between 1990 and 1993 in 42 countries where the correlation between subjective wellbeing and marital status was compared. In collectivistic countries, married individuals possessed the highest level of wellbeing compared to groups of other marital status. Also, the researchers compared the difference between the married and unmarried persons; the difference was higher in collectivistic nations than in individualistic nations. Trung, Cheong, Nghi, and Kim (2013) conclude that getting married is still important to individuals compared to being single as far as happiness and life satisfaction are concerned.

Specifically, Diener *et al.* (2000) studied the relationship between marital status and life satisfaction in South Africa. The study shows that married people were more satisfied than cohabitants and the divorced, with the divorced group being the least satisfied. Diener *et al.* (2000) added that married people in the Republic of South Africa have the highest level of wellbeing in comparison to other collectivistic nations. However, the satisfaction levels of divorced individuals were among the lowest in all collectivistic countries. This implies that divorce has a greater effect on life satisfaction in collectivistic countries than individualistic

countries, more importantly given the low tolerance of divorce in the Republic of South Africa and other African nations (Botha & Booysen, 2013).

Powdthavee (2007) finds that South Africans who did contract marriages are happier than people who are separated and the never-married group. Also, people who are married are more satisfied with life than never-married, separated, divorced or widowed people (Gove, Hughes, & Style, 1983). Alternatively, people who are more satisfied with their lives are more prone to get married (Stutzer & Frey, 2006). Marriage also increases subjective wellbeing as it was shown that married persons reported, on the average, a stronger level of subjective wellbeing than never-married people (Lucas, Clark, Georgellis, & Diener, 2003).

This finding is in line with the work of Kamp-Dush, Taylor, and Kroeger (2008). In their study, they used latent class analyses to categorise people into a low, middle and high happiness marital line based on 20 years of figures. The result reveals that those who started the study with higher levels of happiness are prone to end up in the high marital satisfaction class. The study also shows that those in the high marital satisfaction class declined the least over time on the happiness scale (Kamp-Dush *et al.*, 2008). In the same vein, Hawkins and Booth (2005) examined the long term outcomes of chronic marital unhappiness. Their findings reveal that those who remained in unhappy marriages were less happy overall than those who divorced and remarried. Hence, Dyrda, Raysamb, Nes, and Vitterso (2011) observe that having a satisfying amorous connection is essential for maintaining and increasing life satisfaction. This implies that having a fruitful marriage can increase life satisfaction. Stanley, Ragan, Rhoades, and Markman (2012) contend that individual life satisfaction has a role to play in shaping the quality of future relationships.

Stack and Eshleman (1998) studied the effect of marital status on wellbeing in seventeen developed countries, using panel data for three years. The correlation between marital status and wellbeing was significant in most of the countries used in the study. The researchers report that marriage is connected with higher levels of financial satisfaction and health, which invariably results in a higher level of life satisfaction. They also found that married people were more satisfied than cohabiters, while the cohabiters were more satisfied than single persons. Mastekaasa (1994) used figures from 19 nations to evaluate the wellbeing of married, divorced, widowed and those individuals who have never married. The results show that the married class persistently experienced a very high subjective wellbeing, whereas the divorced group and the widowed group persistently experienced low subjective wellbeing.

Scholars (Botha & Booysen, 2013) have further explained the relationship between marriage and subjective wellbeing from the social selection or social causation perspective. Social selection suggests that the more satisfied individuals are, the greater the likelihood to get (and remain) married than less satisfied persons. The satisfied individuals have more attractive personalities (Botha & Booysen, 2013). Social causation proposes that marriage makes people more satisfied due to the protective emotional and relational factors that are normally associated with marriage (Botha & Booysen, 2013; Gove, Style, & Hughes, 1990). Furthermore, married people are generally healthier (Stack & Eshleman, 1998; Waite 1995; Zimmermann & Easterlin, 2006) and earn substantially higher incomes compared to people in other marital status groups (Rindfuss & Van den Heuvel, 1990; Schoeni 1995; Zimmermann & Easterlin, 2006).

Nevertheless, Hink and Gruen (2007), using the Quality of Life/Needs Assessment Survey conducted in Durban, South Africa in 1999, 2003 and 2004, report no statistically significant relationship between marital status and wellbeing even when types of marriage were controlled. Also, Posel and Casale (2011) collected South African survey data on relative income

dynamics and their relation to subjective wellbeing. Marital status was used as a control and the result shows no significant difference between married, cohabiting, divorced or widowed individuals and singles on subjective wellbeing.

While Mahadea and Rawat (2008) studied a small sample of respondents in Pietermaritzburg by using descriptive analysis, they reported that married individuals showed the highest levels of wellbeing in relation to persons from all other marital statuses. The main issue with the Mahadea and Rawat (2008) study is that it lacks external validity due to the small sample used. Therefore, the majority of the research in developed countries shows that subjective wellbeing is high among married persons. While in developing countries, such a finding has been inconsistent, this may be partly due to the scale used in some of these studies which is not sensitive to the perception and practice of people living in these developing countries, especially in Africa.

Lee and Ono (2012) in their study *Marriage, Cohabitation and Happiness: A Cross-National Analyses of 27 countries* report that there is a happiness gap between married and cohabiting persons. The reason for this happiness gap between married and cohabiting persons is the social support given to a married pair, and the stigma of just living without wedlock in strongly religious societies may in turn add to the happiness gap between married and cohabiting individuals (Lee & Ono, 2012). Furthermore, Vanassche *et al.* (2013) assert that the happiness gap between married people and their cohabiting counterparts is a function of social endorsement of alternative family types in the society where they live. Therefore, in nations where people are receptive to alternative family types, the difference between married and cohabiting women in happiness and satisfaction with family is less than in nations where alternative family types are seen as a deviation from their traditional norm.

Gundelach and Kreiner (2004) posit that situations in some countries make people to be happier than in other countries and this difference between these nations is a result of their social relationships. A review of literature on wellbeing by Argyle (2001) shows that social relationships have a great consequence on happiness and other facets of wellbeing; perhaps social relationships is the greatest single determinant of wellbeing. Social relationships have been repeatedly singled out as a strong and main cause of happiness (Lucas, Dyrenforth, & Diener, 2008).

Furthermore, Lucas *et al.* (2008) assert that measures of sociability and extraversion, the length of time spent in social interactions, size of social network, and marital status are all correlated with measures of happiness and wellbeing. This sociability as a factor that predicts wellbeing has been supported in the literature Biswar-Diener and Diener (2006) report that engaging in communal activities (e.g. sharing living quarters) was positively associated with life satisfaction in Calcutta, India. Also, relationship harmony, social connectedness, and co-operation are tied to life satisfaction among the Inuit of Canada, the Native American Navajos and the Chinese (Selin & Davey, 2012). In Mexico, life satisfaction is linked to several relationship factors such as the number of intimate relationships and meeting with friends, relatives and neighbours; these contributes to life satisfaction in Kazakhstan (Selin & Davey, 2012).

Knight, Song, and Gunatilaka (2009) conducted a study on subjective wellbeing among people in rural China; they report that variables like attitudes, social comparisons and aspirations have a positive relationship with the subjective wellbeing of the locals. Greyling (2011) asserts that service delivery, levels of human development, social relationships, material wellbeing, good governance and security are central to the differences in the quality of life scores. It has also been found that tenure status of occupants, earnings and marital status, comfortable size of

residence, good housing services, good running of the housing estates, and housing delivery system are predictors of subjective life satisfaction (Ibem & Amole, 2013).

Lucas *et al.* (2008) conclude that highly outgoing and extraverted persons experience more positive affect than less outgoing individuals. People who value social relationships or have more friends are happier than those who prefer solitude or have few friends. Also, people who are married report higher life satisfaction than people who have experienced divorce or widowhood (Lucas *et al.*, 2008). Furthermore, Stanley, Ragan, Rhoades, and Markman's (2012) study suggests that the idea of helping people to grow their relationships may increase overall life satisfaction and starting a marriage with a higher level of life satisfaction may increase the chances of a happy marriage.

3.2.4 Parenthood, Happiness and Life Satisfaction

Aside from marriage and social relationships, Africans also value children. This has been found to influence happiness and life satisfaction. Again, Peiro (2006) reports that children are paramount to happiness and life satisfaction in developing nations as against advanced countries where they are not seem to be an important factor. Peiro (2006) observes that children may be seen as a financial burden in rich and developed nations, as against to other nations where they are not seen as a financial burden but rather as contributors to household earnings.

Kohler, Behrman, and Skytt's (2005) study has shown that children's happiness and life satisfaction considerably predicted their parents' happiness and life satisfaction. Winkleman (2005) documents a high long-term relationship between life satisfaction of parents and children within the same family. Powdthavee and Vignoles (2008) show an interrelatedness of wellbeing between parents and wards. Molina, Navarro, and Walker (2011) reveal that income contentment of children is significantly affected by the income contentment of their parents. Schwarz and

Winkleman (2010) find that a percentage increase in a child's happiness is related to the same increase in parent's happiness.

Ong, Ho, and Ho (2013) found that children's happiness is directly related to parent's happiness and life satisfaction. Mahadea (2013) contends that people who are married with a good education and children are found to be happier than others who are not married or have no children. This presupposes that children's happiness has a major impact on their parents' happiness. Trung *et al.* (2013) note that Asians have a traditional practice that having many children could create more wellbeing. However, the results of their study show a higher number of children does not lead to high happiness or life satisfaction in the countries studied except Hong Kong, where there is a direct relationship between the number of children and subjective wellbeing. Trung *et al.* (2013) study contradicts Claudia (2009) which studied 28 transitional economy countries and reports that households with more children have higher levels of life satisfaction.

Moreover, researches conducted in Europe show that there is no link between the number of children and subjective wellbeing. For instance, Aassve, Goisis, and Sironi (2012) use European Social Survey (ESS) 2006 data and report that there was no relationship between the number of children and happiness among fathers while the presence of a child had significant negative outcomes for happiness among mothers. Also, the same the 2006 ESS data was used by Plagnol and Huppert (2010) and they report no correlation between happiness and having a child at home and there was an inverse correlation between having a child and life satisfaction. However Pichler (2006) used 2003 ESS data and his research revealed no significant difference between the quality of life of people living with their partner and children and those living with a partner and having no child. Nevertheless, Soons and Kalmijn (2009) used many years of ESS (from 2002 to 2006) and reported a direct relationship between parenthood and quality of life.

Zimmermann and Easterlin (2006) report there was no significant difference between children and general life satisfaction. Nonetheless, they reported a direct relationship between children and contentment with family life as well as an inverse relationship between children and contentment with one's economic situation. These two results appear to have cancelled each other out thereby making the influence of parenthood on general life satisfaction to be insignificant (Vanassche, Swicegood, & Matthijs, 2013). Shields and Wooden (2003) studied the relationship between parenthood and life satisfaction in Australia. The results reveal that the presence of children below 15 has an adverse consequence on the general life satisfaction of men and women, but the older children who are living at home have no significant influence on their parents' life satisfaction and adult children who have left the house have a positive contribution to their parents' life satisfaction.

The reason for the above results is not farfetched because children are seen as an unnecessary cost that causes role strain which erodes the benefit accrued from the children in the household (Vanassche *et al.*, 2013). Besides the direct cost such as food, clothing, and education, parenthood is also time-consuming. This time could have been used in career development; this implies that parents especially women, deferred the satisfaction of their individual needs and self fulfilment to raise their children. Psychological cost may also be a factor as parents sometimes experience periods of worry or anxiety while nurturing their children (Haller & Hadler, 2006).

The implication of these direct and indirect costs of children can result in role stress which can reduce the effect of satisfaction that is connected with fulfilment of parenthood as a social role (Evenson & Simon, 2005). Nevertheless, Kohler *et al.* (2005) argue from a logical viewpoint that since people in developed nations still wish to have a partner and children, then the combination of forming a partnership and having children can make people happy. On the other hand, children in Africa are seen as favour and blessings, hence they contribute to their

parent's happiness. According to Onyishi, Sorokowski, Sorokwska, and Pipitone (2012) children in Africa are substitutes for social care for the elderly specifically when parents are not sure about their capacity to be self sustaining in old age. This singular thought produces feeling of happiness and life satisfaction because of this sense of security that the child brings to his/her parents.

Muomah (2010) asserts that parenthood is generally desirable in Nigeria. Indeed, child bearing and rearing seem to be two of the main motives why people get married in Africa as compared to marrying without the main purpose of giving birth to children, which is prevalent in the Western culture (Van Gilo & Kraaykamp, 2008). Onyishi *et al.* (2012) contend that the large emphasis that is placed on children highlights their role of bringing happiness into African families. Furthermore, a study conducted in South Africa by Blaauw and Pretorius (2013) indicates that the wellbeing of adults increases as the number of children living with them increases. In summary Aassve *et al.* (2013) posit that the correlation between happiness and childbearing varies according to individuals' characteristics and context factors.

The foregoing studies underscore the importance Africans attach to marriage, social relationships and child bearing. This further explains why marriage, child bearing and social bonding are sources of happiness and life satisfaction. Therefore, there is a need to have a scale that would dwell on these attributes among Africans as far as happiness and life satisfaction are concerned. Moreover, any scale on happiness and life satisfaction that is meant to be used among Africans must take cognisance of these values.

3.2.5 Religiosity, Ritual, Happiness and Life Satisfaction

Religious belief is a critical part of people's lives (Emmons, 1999; Tarakeshwar, Stanton, & Pargament, 2003; Mirkhan *et al.*, 2014) and religious belief is also present in all cultures

(Atran & Norenzayan, 2004; Norenzayan & Heine, 2005). The role of ritual participation in subjective wellbeing has been increasingly appreciated by researchers (Rossano, 2014). Therefore, numerous studies have linked religiosity and subjective wellbeing (Ball, Armstead, & Austin, 2003; Bastida, & Gonzalez, 2004; Chatters, 2000; Ferriss, 2002; Greene & Yoon, 2004; Hackney & Sanders, 2003; Harris, 2002; Hills & Pargament, 2003; Maselko & Kubansky, 2006; Okulicz-Kozaryn, 2010; Swinyard, Kau, & Phau, 2001; Zullig, Ward & Horn, 2006; Soydemir).

Subjective wellbeing correlates significantly with religious certainty (Ellison, 1991), the level of one's relationship with God (Pollner, 1989) and devotional as well as congregational features of religiosity (Ellison, Gay, & Glass, 1989) after the influence of demographic variables such as age, income and marital status have been controlled. Similar results have been found among the Arabs (Abdel-Khalek, 2002; 2006, 2007, 2011, 2013; Abdel-Khalek & Eid, 2011; Abdel-Khalek & Lester, 2007, Ashkanami, 2009; Baroun, 2006). Rossano (2014) reports a study which showed that wellbeing appears to increase with increasing religious participation. In addition, Maheshwari and Sing's (2009) study shows that there is a direct relationship between religious attitude, happiness and life satisfaction.

However, some researches did not find a relationship between subjective wellbeing and religiosity (Francis, Ziebertz & Lewis, 2003; Lewis, 2002; Mirkhan et al., 2014; O'Connor, Cobb & O'Connor, 2003; Sloan & Bagiella, 2002; Snoep, 2008), while other studies report an inverse relationship between religiosity and subjective wellbeing (Abdel-Khalek, 2013; Veenhoven, 2002). Abdel-Khalek (2013) concludes that religiosity can have both direct and inverse effects on subjective wellbeing, and this varies across context. Nonetheless, the number of researches that report a direct relationship is more than the number of researches which report an inverse relationship (Abdel-Khalek, 2013; Koenig, McCullough & Larson, 2001).

Africans are very religious; research has even shown that African Americans are more religious than Europeans (Argyle, 1999). Okulicz-Kozarcy (2010) studied religiosity and life satisfaction in 79 countries and found that the correlation between religiosity and life satisfaction is bimodal, that is, people who are religious can either be satisfied or dissatisfied with their lives. This correlation depends on whether religiosity promotes social capital or religiosity does not promote social capital. A situation where religiosity enhances social capital would lead to high life satisfaction whereas religiosity, which does not enhance social capital, would lead to dissatisfaction with life. Also, religious people have been found to have greater life satisfaction in countries with a general positive social norm towards religiosity as against countries with a low positive social norm towards religiosity (Okulicz-Kozarcy, 2010; Rossano, 2014). Hamilton (2004) opines that intrinsic religious devotion tends to have a direct influence on life satisfaction as it enhances virtuosity, spirituality, the values of caring and concern for others and mankind.

Patel, Ramgoon, and Paruk (2009) reported a significant positive correlation between life satisfaction, religiosity and religious wellbeing. Eungi Kim (2003) indicates that Koreans who are religious have a higher level of satisfaction than those who are not religious. Also, people who are religious tend to experience higher wellbeing. Also, partaking in religious activities, the level of one's religious affiliation, relationship with God as well as prayer have been linked with greater wellbeing (Ferriss, 2002; Poloma & Pendleton, 1990; Witter, Stock, Okun, & Haring, 1985). Farooqi and Tariq (2012) report that respondents' belief in Allah (God) was the highest predictor of life satisfaction and there is a significant positive correlation between belief in Allah (God) and life satisfaction among cardiac patients. Tate and Forcheimer's (2002) study shows that there exist a strong association between spirituality, quality of life and life satisfaction. The research reveals that spirituality is a major predictor of life satisfaction among cancer patients

who are going through rehabilitation. Yoon and Lee's (2007) study shows positive relationships between spirituality, religiousness, social support and psychological wellbeing.

Clarks and Lelkes (2009) conducted an investigation on religious interactions in life satisfaction, the result of the study shows that individual's own religious behaviour has a direct correlation with life satisfaction. Also, it was revealed that people living in a highly religious society are more satisfied with their lives in comparison with people who live in a less religious region. Headey, Schupp, Tucci and Wagner (2008) explored the connection between religious practices and life satisfaction. The longitudinal analysis indicates that individuals who are religious achieved long term satisfaction in their lives, while those who are less religious achieved less satisfaction.

The reason for this association is that religious organisations create social networks and support systems (Diener & Ryan, 2009). Many researchers have agreed on this, but the theoretical explanation for this association remains vague. Some studies argue that religious participation increases one's connection with God, which boost one's level of happiness (Barkan & Greenwood, 2003; Pollner, 1989), while others suggest that religious participation adds to the number and quality of one's social ties within the society (Ellison & George, 1994) which invariably enhances one's level of happiness (Diener & Seligman, 2002). Childs (2010) examined the two lines of argument and reports that one's assumed association with God is more strongly related to happiness than the social cohesion or social ties within the community. Fife (2005) reported a significant correlation between salience of religion obligations and life satisfaction for European Americans, but not for African Americans. Furthermore, Diener and Clifton's (2002) study, which used a wide range of probability samples reported a significant but small correlation coefficient between religiosity and satisfaction with life.

In contrast to the above studies, Lewis, Joseph, and Noble (1996) reported no correlation between religiosity and life satisfaction among a sample of undergraduate students in Northern Ireland. This result is in line with Okulicz-Kozarcy's (2010) assertion which states that religiosity that enhances social capital would lead to high life satisfaction, while religiosity which does not enhance social capital would lead to low life satisfaction. Social capital is defined by Putnam (2000) as a set of social relations, shared norms and values existing in a community. This is one of the attributes of collectivistic society and Northern Ireland is an example of individualistic society.

Hence, Lewis *et al.* (1996) reported no relationship between religiosity and life satisfaction among undergraduates in Northern Ireland. Dorahy, Lewis, Schumaker, Akuamoah-Boateng, Dube, and Sibiya (1998) report no significant relationship between religiosity and life satisfaction for women in four samples of University Students from Ghana, Nigeria, Northern Ireland and Swaziland. But there was a significant relationship between religiosity and life satisfaction for men in three of the four samples. The result obtained from Dorahy *et al.* (1998) study might be due to the scale used, which was not sensitive to the cultural values of the respondents. Also, the researchers combined two categories of respondents, which were respondents from individualistic as well as collectivistic cultures. This may account for the non-significant association observed for women in the four samples. Childs (2010) further examined the correlation between religious participation and happiness overtime. The study revealed that religious participation has a stronger influence on happiness as compared to that which happiness had on religious participation. Also a higher level of religiosity has been connected to higher life satisfaction and lower suicide rates (Diener & Seligman, 2004; Helliwell, 2007). Gundlach and Opfinger (2013) report a direct relationship between happiness and religiosity. This relationship between wellbeing and religiosity is assumed to have started from a sense of meaning, purpose

and from social networks as well as the support system created by churches and other religious institutions (Diener & Ryan, 2009).

Booyesen and Botha (2011) identify religious activities, social trust, physical exercise, health and marital status as factors influencing subjective wellbeing, while Lee and Ono (2012) opine that gender, presence of children, age, employment status, educational attainment, income and religious beliefs are features that are related to general happiness in the literature. Blaauw and Pretorius (2013) reveal that respondents who deem religious activities important reported higher levels of wellbeing. Boroah's (2006) study shows that happiness is a function of belief in a deity, income, employment, family and social life as well as good health. In a study conducted by Berthold and Ruch (2014), the findings showed that those who practised their religion scored significantly higher on life satisfaction than both non-practising and non-believers. In a study by Kacapyr (2008) titled Cross-country determinants of satisfaction with life, the result shows that nations with better health and more spirituality (as calculated by the percentage of the population that believes in God) are more satisfied with life.

3.2.6 Culture, Belief System and Subjective Wellbeing

Joshanloo (2013) argues that different belief realms, which include cultural, religious and superstitious beliefs, influence people's answers to life satisfaction items. According to Joshanloo (2013) this has not received enough research interest in the subjective wellbeing literature. For example, Minami (1971) reveals that in Japanese culture, being happy is considered to be harmful in one way or another because happiness is seen as dangerous as it can cause affliction. It is also a known fact that in some Asian cultures that there are limits to one's expression of happiness or else one will have a misfortune. For instance, both Chinese and African proverbs say "excessive happiness begets tragedy" (Bryant & Veroff, 2007). People who

share this belief may be conscious of it whenever they are responding to happiness or life satisfaction scales and this may affect responses as well as their interpretation of the items in the scale.

In the same vein, Good and Good (1998) note that ever since the 1979 Iranian Islamic uprising, happiness has been linked with shallowness and is portrayed as being harmful in Iran while sadness is related to personal strength. A strong and deep person is considered as a sad one whereas a happy person is regarded as a petty, noisy, foolish, talkative and vulgar one who cannot sense the tragic in life. Therefore, any happiness and life satisfaction scale must be conscious of this fact among Iranians in order to have a correct and valid assessment. The above reiterates the fact that the predictors of wellbeing are not universal across cultures or countries (Clark *et al.*, 2005). In addition, Eckersley (2009) says research showed that some differences in SWB between countries appear is due to the fact that there are differences in peoples' perception of SWB.

In relation to the above, Scollon, Diener, Oishi, and Biswas-Diener (2002) include indigenous emotional words coined from the western emotional words when they assessed pleasant and unpleasant affect in five cultures. The study reveals that these native emotional words were highly loaded on pleasant and unpleasant affect factors. The result shows that these indigenous emotional words are outstanding measures of the core emotional factors. This finding still supports the point being made that all the existing happiness and life satisfaction scales are relative to the culture they are designed for and as such they are not generic. To make a proper assessment of happiness and life satisfaction among Africa, an indigenous scale is required.

In spite of the dearth of research on happiness and life satisfaction in Africa and Asia, few researchers have tried to compare happiness and life satisfaction between Africans, Asians,

Europeans and North Americans. Oishi, Seol, Koo, and Miao (2011) find that American participants scored high on agreeable, conscientious, extraverted, open to experience, happier and more satisfied with their lives than Koreans. They conclude that the differences were due to cultural acceptability of these traits which was not measured by the scales used in the study.

Hofer, Chasiotis, and Campos (2006) report a significant difference between three cultural samples with respect to life satisfaction; participants from Costa Rica were more satisfied with their lives than Germans and Cameroonians participants. The observed differences might be due to the Satisfaction With Life Scale by Diener *et al.* (1985) which was used in the study and it has been found not to be sensitive to Africans' perception of what it takes to be satisfied with life. Furthermore, some items in the scale need to be revised (Joshanloo, 2013; Maluka & Grieve, 2008). Koydemir *et al.* (2013) studied the role of affect balance versus social support on emotional intelligence and life satisfaction in India and Germany. The result shows that Germans reported significant higher life satisfaction, affect balance and emotional intelligence than Indians. The observed results would have been different if the scale used in collecting the data had taken into consideration international differences in the definition of life satisfaction.

Consistent with studies among adult populations, research conducted among youths show that Korean students showed a lower life satisfaction than their American counterparts (Park & Huebner, 2005). The observed differences between the Koreans and Americans exist in the self and school facets, with Korean students reporting less satisfaction in the self facet and American students reporting less satisfaction in the school facet (Park & Huebner, 2005). Similarly, Tanaka, Mollborg, Terashima, and Borres (2005) report that Japanese students depicted higher physical and psychiatric symptoms, less happiness and more stressful life events and lower levels of life satisfaction as compared to their counterparts from Sweden.

The above studies, according to Proctor, Linley, and Maltby (2009), highlight the differences that exist in both overall and specific domains of life satisfaction among adolescents from diverse cultures. Besides, these differences can be explained from the theories concerning value variations that exist between individualistic and collectivistic cultures (Oishi *et al.* 1999). Therefore, if these differences have been proven to exist then there should a measuring instrument that would be sensitive to these differences. This implies that happiness and life satisfaction scales should be culture specific.

Besides, Proctor *et al.* (2009) assert that values, beliefs and behaviours of one's cultural group and the perception as well as treatment of that culture by the larger society, can affect the subjective wellbeing of ethnic minority. For instance, Constantine, Alleyne, Wallace, and Franklin-Jackson (2006) examine the relationships between Africentric cultural values, self-esteem, perceived social support, satisfaction and life satisfaction among a group of African-American adolescent girls. The findings reveal that life satisfaction is directly related to adherence to Africentric values and self esteem while there is no correlation between adherence to Africentric values and social support satisfaction.

In addition, a research conceived to study the relationship between Chinese cultural belief about adversity and psychological wellbeing as well as problem behaviour showed that respondents who reported lower levels of approval of Chinese cultural beliefs about adversity have lower life satisfaction and depicted higher levels of behavioural problems and engaged in substance abuse more as compared to those respondents with positive approval (Proctor *et al.*, 2009; Shek, 2004; 2005). This further buttresses the point being made that since respondents' cultural values are determinants of life satisfaction, measures of life satisfaction must capture these values among the target population, which most of the existing scales that are used to study happiness and life satisfaction among Africans lack.

In the same vein, Gundelach and Kreiner (2004) assert that culture plays an important role when respondents are answering questionnaire items. Some nations may have stricter social rules against giving extreme answers to items. In the words of Joshanloo (2013), “items reword and content could help in improving the existing satisfaction scales”. Changing strong and extreme words such as ‘excellent’ or ‘ideal’ may lessen the bias produced by certain cultural beliefs. Also, a cross-cultural study reveals that different factors lead to happiness for people with different needs and aspirations (Diener, Suh, Lucas, & Smith, 1999).

3.2.7 African Researchers and Subjective Wellbeing

Since Africa has been regarded as a black spot as far as researches in happiness and life satisfaction are concerned (Pflug, 2009), African researchers have revalidated some of these happiness and life satisfaction scales for use in order to pave the way for research in the area among Africans. Oladipo and Balogun (2011) revalidated satisfaction with life scale by Diener *et al.* (1985) among adolescents in Nigeria. They concluded that the satisfaction with life scale has a good structural characteristic, and is a reliable and valid instrument that can be used among adolescents in Nigeria.

Wissing *et al.* (2010) validated a translated version of three measures of psychological wellbeing from English to Setswana. These are Sense of Coherence scale (SOC) by Antonovsky (1987), Satisfaction with Life Scale (SWLS) by Diener *et al.* (1985) and Kammann and Flett (1983) Affectometer 2 (AFM) scale. The study shows that Setswana SWLS and AFM are consistent and valid for use among Tswana people. The factor structures of the scales were in consonance with the underlying factor structures of the main scales.

But Van Beuningen (2012) states that SWLS suffers from the data collection mode which makes a specific group of respondents misinterpret the scale. Van Beuningen (2012) therefore

advocates a one-item measure of life satisfaction for use in place of SWLS. Thus, Olapegba, Oladipo, and Idemudia (2012) in their study entitled 'Evidence of Low Life Satisfaction among undergraduates in Southwest Nigeria' used the SWLS by Diener *et al.* (1985) to measure life satisfaction among undergraduates. The result obtained from the study might give a false negative as the items of the scale are not sensitive enough to the cultural variations that exist between the country where the scale was standardised, and Nigeria, where the study was carried out. Also the respondents might have misinterpreted the items of the scale as observed by Van Beuningen (2012); hence, low life satisfaction was reported.

Damme-Ostapowisz, Krajewska-Kulak, Rozwadowska, Nahorski, and Olszanski (2012) studied quality of life, satisfaction with life and disease acceptance among malaria patients in Nigeria. The outcome of the study indicates that there is a significant relationship between the level of acceptance of illness, the quality of illness as well as satisfaction with life. Another study, by Adewuya and Makanjuola (2010), used a single item to measure subjective life satisfaction and reported a weak relationship between subjective life satisfaction and objective living conditions of Nigerian patients with schizophrenia. In the same vein, Ibem and Amole (2013) studied subjective life satisfaction in public housing in urban areas of Ogun State, Nigeria with a single item scale. The study reveals that 61% of the respondents were generally satisfied with the state and spatial features of the residence unit component but were dissatisfied with entrance to the housing service and infrastructural facilities.

One of the criticisms of a single item scale is that it is not possible to get an estimate of internal consistency reliability (Diener, 1984). In addition, the scores on a single item scale tend to be distorted, with most answers falling into the happy category (Andrews & Withey, 1976). The single item cannot cover all facets of subjective wellbeing but must depend on respondents being able to integrate all these domains before arriving at a definite response (Diener, 1984).

Ejechi (2012) studied quality of life of retired and re-engaged academics in Nigeria; the result shows that female respondents tend to have better physical health and life satisfaction than their male colleagues. Also, respondents who retired voluntarily experienced better life satisfaction as compared with respondents whose retirement was mandatory. LeRoux and Kagee (2008) studied 117 people living with chronic illness in Western Cape, South Africa and the result shows that participants scored higher in life satisfaction compared to other South African samples. Greyling (2011) highlights factors such as service delivery, levels of human developments, social relations, material wellbeing as well as issues of governance and security as central to understanding the difference in the quality of life scores of people living in Gauteng province.

Blaauw and Pretorius (2013) reveal that age, race, level of income, years of education, gender, marital status and number of children account for different levels of wellbeing. Also height, health, and residence in urban areas do not predict wellbeing compared to most studies in the developed economy. Also, Westaway and Maluka's (2005) study made use of the Satisfaction with Life Scale by Diener, *et al.* (1985) and reported that respondents scored above the neutral point despite considerable dissatisfaction with Item 5 on the scale. Researchers like Hultell and Gustavsson (2008), Joshanloo (2013), Maluka and Grieve (2008), and Westway and Maluka (2005) and have asserted that some of these scales need to be reworded. The point being made is that the existing scales on happiness and life satisfaction do not take into consideration international differences and life circumstances. Therefore they are inadequate in measuring happiness and life satisfaction among Africans.

3.3 Summary of Related Studies

The need for an indigenous happiness and life satisfaction scale has been established through the literature cited above. The review of the literature started with the existing scales that were reviewed in terms of their content and structure as well as relevance of the items to the underlying construct that they are measuring. It was revealed that nearly all the existing scales on subjective wellbeing have one shortcoming or another. Besides, some of the items of these existing scales need to be revised if they are to be used in another culture. Therefore, this created gaps that the present study wants to fill.

Moreover, the methods adopted in standardising these existing scales were reviewed; the review showed that one scale developer used confirmatory factor analysis method while another used exploratory factor analysis, though each of these analyses has its own merits and demerits. In order to have a valid and reliable scale, the recommendation of Clark and Watson (1995) would be adopted that says it would be novel to apply the two analyses because they are complementary.

Furthermore, distinctions have been made between an individualistic culture and a collectivistic culture. Studies such as Iben and Amole (2013), Koydemir *et al.* (2013), Oishi *et al.* (1999), Pflug (2009), Rodrigues-Mosquera and Imada (2013), and Suh *et al.* (2008) contend that determinants of happiness and life satisfaction vary across cultures. Nearly all the existing scales on subjective wellbeing were developed in individualistic cultures and these scales may not be relevant in collectivistic cultures like those in Africa. Moreover, there are some cultural values in Africa such as social relationships and recognition, marriage, parenthood, religiosity, rituals as well as religious belief which are placed in high esteem. These cultural values have been reported to be correlated with happiness and life satisfaction. Scholars such as

Botha and Booysen (2013), Diener and Biswas-Diener (2008), Joshanloo (2013), Kahneman and Krueger (2006), Layard (2011), Mahadea (2013), Onyishi *et al.* (2012), Stanley *et al.* (2012), Vanassche *et al.* (2013) report that these values are critical to happiness and life satisfaction. Hence they must be taken into consideration in the designing as well as measuring of happiness and life satisfaction among Africans.

Researchers like Hultell and Gustavsson (2008), Joshanloo (2013), Maluka and Grieve (2008), Westway and Maluka (2005) have asserted that some of these existing scales need to be reworded because culture plays an important role when respondents are answering questionnaire items (Gundelach & Kreiner, 2004). Joshanloo (2013) asserts that rewording the items and content of these existing scales can improve their efficiency. A consequence of this means that the existing scales on happiness and life satisfaction are inadequate in measuring happiness and life satisfaction among Africans.

3.4 Research Hypotheses

1. The happiness subscale of HLSS would discriminate those who are happy from those who are not happy.
2. The life satisfaction subscale of HLSS would discriminate those who are satisfied with life from those who are not satisfied with life.
3. There would be a significant direct relationship between the happiness subscale of HLSS with a scale measuring a similar concept.
4. There would be a significant direct relationship between the life satisfaction subscale of HLSS and a scale measuring a similar trait.

CHAPTER FOUR

RESEARCH METHOD

This chapter comprises the research design, setting of the study, participants, instrument, sampling technique and procedure for data collection, ethical considerations and data analysis. This study involves three stages which are item generation, pilot study, and validation of items for the Happiness and Life Satisfaction Scale (HLSS).

4.1 Research Design

The design for this study is a cross-sectional survey design. The design was adopted because the researcher collected data across different participants at a given point in time.

4.2 Research Approach

The research approach adopted for this study is a mixed method research. The method was chosen because both qualitative and quantitative methods were used in item generation, pilot study and validation stages. The qualitative approach was in the form of Focus Group Discussions (FGDs) that were conducted among various segments as well as interest groups that constitute African society. These FGDs helped to generate items for the proposed scale. The FGDs provided a pool of items for the scale. The quantitative approach was used at the pilot study and validation stages.

4.3 Research Setting

The settings of this study are Nigeria and South Africa. For item generation, four sessions of FGDs were conducted in the two countries (two in Nigeria and two in South Africa). In Nigeria, the FGDs were conducted in Lagos and Abuja. The justification for the selection of Abuja and Lagos is because they are metropolitan cities. Lagos was the former capital city of Nigeria while Abuja is the current capital city of Nigeria where various embassies and foreign

mission offices are located. Lagos is also the commercial centre of Nigeria. These characteristics make Abuja and Lagos cosmopolitan cities that attract people from various walks of life as well as people of different nationalities, hence their choice for the FGDs. Mafikeng and Johannesburg were used in the Republic of South Africa. Mafikeng is the capital city of North West province; Mafikeng is also a border city between South Africa and Botswana. This means many foreign nationals, most especially people from Southern Africa Development Countries (SADC), settle in Mafikeng. The location of the city also encourages trans-border trades. Johannesburg is the most populous city in South Africa and very cosmopolitan in nature.

The second phase of the research was conducted in three cities in Nigeria. These cities are Lagos, Abuja and Ibadan. Ibadan city is the largest highly indigenous metropolitan centre in sub-Saharan Africa (Afolayan, 1994); the population of Ibadan contains representation of all ages, socioeconomic status, educational levels, ethnic groups and religious denominations (Berner, 1998). As a result of these, Ibadan was selected among the cities that were used in the second stage which is the pilot study.

The third stage of the study which is the validation stage was conducted in Nigeria and South Africa. Five cities in Nigeria and three cities in South Africa were used at this phase of the work. These cities were Abuja, Lagos, Ibadan, Kano, and Calabar in Nigeria. Johannesburg, Mafikeng and Pietermaritzburg were used in South Africa. The choice of these cities is based on proximity to immigrants. For instance, Calabar is chosen because of its closeness to immigrants from East and Central Africa. Kano is regarded as a commercial hub of the Northern region of Nigeria. Pietermaritzburg is the administrative headquarters of Kwazulu Natal province which is the second most populated province in the Republic of South Africa and a large number of immigrants as well as South Africans are residing there.

4.4 Participants

The participants for this study were Africans who live on the continent and showed willingness to participate in any stage of the research. A total sample of 1924 adult Africans participated in the study. The breakdown of the figure is as follows: 48 participants took part in the four FGDs that were conducted with an average of 12 participants in each session which was the first stage of the study. 408 Africans participated in the second stage which was the pilot study and 1468 respondents were sampled for the main study which is regarded as the third stage.

Out of the 48 participants that took part at the item generation stage, 10 (20.8%) were female while 38 (79.2%) were male. The average age of the participants was 33.5 years; the lowest age was 20 years while the highest age of the participants was 57 years. All the four geographical regions of Africa were represented at this stage of the study.

Table2: Showing the Demographic Variables of the Participants at Stage One of the Research

Stages	Demographic Variable	Frequency	Percentage
ITEM GENERATION	SEX: Male	38	79.2%
	Female	10	20.8%
	Nationality: Nigerians	16	33%
	Ghanaians	5	20.8%
	Sudanese	2	4.2%
	Eritreans	2	4.2%
	Malawians	2	4.2%
	Kenyans	2	4.2%
	DR Congolese	2	4.2%
	South Africans	5	20.8%
	Tanzanians	2	4.2%

To field test the HLSS, which was the second stage of the research, 408 participants took part in the pilot study; 204 (50.0%) were male, 175 (42.9 %) were female while 29 (7.1%) did not state their sex. Their ages range from 17 years to 68 years with the mean age of 36.39. The remaining demographic factors are shown in the table below:-

Table 3: Showing the Demographic Variables of the Participants at Stage Two of the Research

Stage	Demographic Variable	Types	Frequency	Percentage
PILOT STUDY STAGE	Gender	Male	204	50.2%
		Female	175	42.9%
		Missing Value	29	7.1%
	Marital Status	Single	101	24.8%
		Married	245	60.0%
		Cohabiting	3	0.7%
		Separated	15	3.7%
		Divorced	10	2.5%
		Missing value	34	8.3%
	Ethnic Affiliation	Ashanti	115	28.2%
		Ga	72	17.6%
		Ewe	47	11.5%
		Ahafo	25	6.1%
		Vogar	4	1%
		Kokomba	4	1%
		Fanti	25	6.1%
		Bamleke	7	1.7%
		Kpelle	4	1%
		Bimbila	11	2.7%
		Aigbe	14	3.4%
		Dagoma	4	1%
		Missing Value	76	18.6%
	Nationality	Ghanaians	351	86%
		Togolese	9	2.2%
		Cameroonians	2	0.49%

	Religious Affiliation	Sierra Leoneans	3	0.74%
		Liberians	6	1.5%
		Beninoire	6	1.5%
		Missing Value	31	7.6%
		Christian	248	60.8%
		Muslim	112	27.5%
		Atheist	2	0.5%
		Traditionalist	1	0.2%
		Missing Value	45	11%
	Educational Qualification	School Certificate	91	22.3%
		NCE/ND/Technical College	104	25.5%
		First Degree/HND	149	36.5%
		Masters	15	3.7%
		PhD	4	1.0%
		Missing Value	45	11.0%

1468 participants were involved in the validation stage, which was the main study. The participants consisted of 784 (53.4%) males and 684 (46.6%) females. Ethnic affiliation of the participants ranges from Fulani, Yoruba, Hausa, Igbo, Ijaw in Nigeria; Zulu, Sotho, Tswana, Xhosa, Coloured and Caucasian in South African; Ewe, Suyami, Ashanti, Kabre in Ghana; Vogar Ewe, Ayigbe Ewe, in Togo and Eshew, Dahomeyan in Benin Republic just to mention a few. The occupational distribution of the respondents ranges from Artisans, Civil Servants, Military Officers, Medical Practitioners, Clergymen, Factory workers, Sport Personnel to Politicians etc (See Appendix VII). The remaining demographic variables are shown in the table below:-

Table 4: Showing the Demographic Variables of Participants at the Validation Stage of the Research

Stage	DEMOGRAPHIC VARIABLE	TYPES	FREQUENCY	PERCENTAGE
MAIN STUDY	Sex	Male	784	53.4%
		Female	684	46.6%
	Marital Status	Single	694	47.3%
		Married	701	47.8%
		Cohabiting	19	1.3%
		Divorced	46	3.1
		Separated	8	0.5%
	Religious Affiliation	Christianity	972	66.2%
		Islam	379	25.8%
		Judaism	2	0.1%
		Traditionalist	114	7.8%
		Vodu	1	0.1%
	Educational Qualification	No formal Education	19	1.3%
		Primary/Quran	80	5.4%
		Secondary	381	26.0%
		Diploma/NCE/ND/Grade II	374	25.5%
		Undergraduate	223	15.2%
		First Degree/HND	322	21.9%
		Masters	61	4.2%
		PhD	8	0.5%
	Nationality	Nigerian	860	58.6%
		South African	236	16.1%
		Ghanaian	173	11.8%
		Togolese	160	10.9%
		Beninoire	39	2.7%

4.5 Instrument for Data Collection

The instrument used in collecting the data was a questionnaire which consisted of five sections (See Appendix VI); section A taps demographic variables, Section B consists of the happiness subscale, and section C consists of the life satisfaction subscale. The two subscales of the HLSS were developed by the researcher. Section D consists of the self rating depression scale by Zung (1965) and section E consists of the social health inventory by Njoku (2008).

The Happiness subscale The 23 item happiness subscale of the Happiness and Life Satisfaction Scale (HLSS) measures respondents' perception of happiness. The items measure personal thoughts and actions relating to happiness. It is a self-report measure with a 5-point Likert response format scale, which ranges from strongly agree (5) to strongly disagree (1). The items are worded in the same direction and the score in all the items are added together to arrive at a composite score for each of the participants. The higher the score on the scale, the happier the respondent will be.

The Life satisfaction subscale The subscale consists of 28 items, with a Likert response format which ranges from '5' (strongly agree) to '1' (strongly disagree). The items are worded in the same direction and the score in all the items are added together to arrive at a composite score for each of the participants with a higher score indicating that the respondent is satisfied with his life.

The Self-rating Depression Scale (SDS) This is a 20-item, self reporting scale, which addresses the depression status of the respondents. 10 items out of the 20 items are worded in the positive direction while the other 10 items are worded in the negative direction with the response format ranging from "A little of the time" (1) to "Most of the time" (4). The scoring is then revised for those items that are worded in the negative direction. The reliability coefficient of 0.73 was obtained among 225 patients. The concurrent validity of the instrument was obtained by correlating the score of the scale and the Hamilton physician depression scale which was 0.79. A score of 49 or less is considered normal while 60 and above is considered severe depression. Jegede (1976), Osinowo and Ogunyinka (1995) and Udegbe and Ayasi (1995) have found SDS to be reliable and culturally valid among Africans.

The Social Health Inventory The 15 items social health inventory was developed by Njoku (2008). The items measure individual social health and interpersonal relationship. The items of the scale are worded in the same direction, with the exception of items 2 and 11, with

the response format ranging from strongly agree (4) to strongly disagree (1). In scoring, items 2 and 11 are reversed and score on each of the items are added together to arrive at a composite score. A score above 45 is considered adequate while a score less than 34 is considered not adequate.

4.6 Sampling Techniques

At stage one of the study, stratified random sampling and systematic random sampling techniques were used in the selection of the participants at each session of the FGDs. Stratified random sampling was adopted because Africa was stratified into four regions; these were North Africa, West Africa, East & Central Africa as well as Southern Africa. Each of these regions was regarded as a stratum and the researcher selected the participants of the FGDs from these strata so that each region was represented at the session of the FGDs. In selecting the participants for the FGDs, the researcher used a systematic random sampling by writing “YES” and “NO” on small sheets of paper which were folded. The number of ballot papers to be picked was equal to the number of the volunteers on the ground so that after each of the volunteers had picked a paper nothing would be left on the tray. Any volunteer who picked “YES” was admitted as a participant in the FGDs.

Purposive sampling and proportional sampling methods were adopted in the selection of participants used in the pilot study which is the second stage of the research. A Purposive sampling technique was used in selecting the West African sub region; the choice of this target population was based on the fact that the region has the largest number of people living in Nigeria as compared to other regions of Africa (National Population Commission, 2010). Again, the region consists of many countries as well as different cultural backgrounds which gave the opportunity to test the scale before the main study.

A Proportional sampling method was used in the selection of the number of participants who were selected from the fifteen countries that make up West Africa. This was necessary

because the 2010 population census shows that some countries have more of their people living in Nigeria than other countries. This implies that on equal number of participants would not be available for sampling from these countries hence the need for a proportional sampling method which gave the opportunity for selection based on the number of people from various West African countries living in Nigeria.

The sampling technique that was used at the third stage of this study was a cluster sampling technique. The African continent was divided into clusters. These are the West African cluster, Nigeria as a single cluster because of her population, South Africa as a single cluster, North African cluster, Southern African cluster, East and Central Africa as a cluster. From these clusters, three clusters were randomly selected (the Nigerian cluster, South African cluster and West African cluster). A simple random sampling technique was adopted to select participants from the Nigerian and South African clusters while proportional sampling method was used to select participants from West African cluster who are living in either Nigeria or South Africa.

4.7. Scale Development

Scale development remains a thriving but tedious endeavour in psychological testing and construction. This is because the main aim of scale development is to construct a valid measure of an underlying concept. As a result of this, many researchers who engage in this area have designed different methods of achieving reliable and valid scales. To achieve this feat, many scholars (Cronbach & Meehl, 1955; Nunnally & Bernstein, 1994; Clark & Watson, 1995; DeVellis, 2012) have recommended a variety of steps in the scale development method. The approach described by various scholars is similar but uses various labelling to refer to the same step.

In developing the HLSS, the guidelines in scale development as they were written in literature were followed. Scholars such as Clark and Watson (1995), and Cohen and Swerdlik

(2002), DeVellis (2012), Gerbing and Anderson (1998), Ojedokun (2015) outlined the steps involved in scale development. For instance, Cohen and Swerdlik (2002) highlighted 5 stages of scale development. They are: test conceptualisation, test construction, pilot study, item analysis, and test revision. Ojedokun (2015) used 5 stages of scale development which were item generation, item selection, content validity through member checking, review of item pool by experts and pilot testing. There are also various steps suggested by various scholars (e.g., Clark & Watson, 1995; DeVellis, 2011; DeVellis 2012; Gerbing & Anderson, 1998; Nunnally & Bernstein, 1994), but what is noticeable is that they often described similar steps by using different labels.

The steps outlined by Clark and Watson (1995) will be adopted in this study which include scale conceptualisation, item generation, item writing and scaling, scale refinement (i.e., item analysis, internal consistency, and exploratory factor analysis EFA), and structural analysis using Confirmatory Factor Analysis (CFA). Therefore, the construction and validation of HLSS follows a process, consisting of 6 steps, by Clark and Watson (1995), namely, scale conceptualisation, item generation, item writing and scaling, item selection, scale refinement (i.e., item analysis, internal consistency, and EFA) and structural analysis (i.e., confirmatory factor analysis).

The above 6 steps procedure will be grouped into 3 stages, which is in line with the recommendations of Gerbing and Hamilton (1996), Gerbing and Anderson (1998) and Ojedokun (2016). Stage 1 comprises scale conceptualisation and item generation; stage 2 consists of item purification and revision; stage 3 includes validation which involves the use of confirmatory factor analysis.

4.7.1 Scale Conceptualisation

Evaluation of the existing literature on happiness and life satisfaction showed that none of the existing scales were developed in Africa therefore they have not been able to capture the

essence of happiness and life satisfaction among Africans. Again, literature also revealed that some of these scales need to be revised for use in other cultures. In response to these gaps, items will be generated to measure happiness and life satisfaction among Africans. The first step will be to conceptualise happiness and life satisfaction by generating items that capture the construct. Happiness is defined as feeling of pleasure, contentment with one's situation at a given period of time, while life satisfaction is defined as the evaluation that an individual makes about events and happenings in his/her life as satisfactory or nor satisfactory.

4.7.2 Item Generation

To ascertain that the HLSS includes items that reflect the meaning and definition of happiness and life satisfaction among Africans, the aggregate of items built-into the instruments were based on FGDs that were conducted with representatives of all the various African blocks as participants. The goal of the FGDs was to decide on what the participants thought is happiness and life satisfaction and what makes them say they are happy or satisfied with their lives. Information and opinions gathered from the FGDs were synthesised into statements and tallying was used in order to eliminate repetition. A total number of 70 items and 62 items emerged for the happiness and the life satisfaction subscales respectively (See Appendix III).

4.7.3 Item Writing and Scaling

The 70 items for the happiness subscale and 62 items for the life satisfaction subscale were written in a reader-friendly manner that would suit the reading level of prospective respondents. The items were also structured in a way that they were either relevant to happiness or life satisfaction. The items were also structured in the sense that they reflected an individual's conscious actions and thoughts which are related to happiness and life satisfaction.

With regards to scaling, there are various methods of scaling, but the Likert format is commonly used in survey and behavioural research (Cook, Hepworth & Warr, 1981; Kerlinger & Lee, 2000; Ojedokun 2016), because Likert is more reliable, gives stable results and produces

a better scale (Clark & Watson, 1995; Comrey, 1988). Multiple-choice item formats are most appropriate for use in factor analysis (Kaplan & Saccuzzo, 2005). Researchers such as Clark and Watson (1995) have advocated the use of a Likert (1932) 5-point equal appearing interval scale as the ideal response format as an alternative to 7-point or 9-point because too many response alternative does not automatically increase the reliability or validity of a scale; having too many alternatives can bring in a component of indiscriminate responding that makes scores on the scale to be less valid (Clark & Watson, 1995). Hence, the items on the HLSS adopt the five-point frequency based system. Also, the coefficient of alpha reliability has been found to increase with a Likert type scaling system (Lissitz & Green, 1975; Ojedokun, 2016). The responses on the HLSS vary from Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), to Strongly Disagree (1).

4.7.4 Item Selection

The total pool of 70 items and 62 items were generated for happiness and life satisfaction respectively. These proposed items were typed out and given to four University Dons who are experts in test development to look at the technicality as well as the structure of each of the proposed items of the scale. The experts reviewed each item of the proposed scale in relation to its relevance to the main concept and they also checked items that appeared to be repetitive or have the same meaning as each other. After the scrutiny, the happiness subscale was reduced from 70 items to 48 items and the life satisfaction subscale was reduced from 62 to 53 items. To further strengthen the content validity of the proposed scale, the remaining 48 items of happiness subscale and 53 items of life satisfaction subscale were given to another five University Lecturers who are experts in the field of Psychology to rate each item on the subscales with a response format of “Suitable” and “Not Suitable” (See Appendix IV). Any item that was rated by less than three experts as “Suitable” was deleted from the proposed scale because such an item was considered weak or not valid. At the end of the day, a total of 42 items were left in the

happiness subscale and 47 items were left in the life satisfaction subscale. This means that 28 items from the happiness subscale and 15 items from the life satisfaction subscale were dropped because they were not technically or structurally good enough to measure the concepts. At the same time, they did not meet at least three out of five experts' rating criterion. The implication of their exclusion from the proposed scale is that they are not regarded as valid items if included in the scale.

4.7.5 Scale Refinement

At the end of phase one which is the item development phase, a scale consisted of 42 items in the happiness subscale and 47 items in the life satisfaction subscale was field tested to purify the items as well as to investigate the idiom, item relevance, precision, viability of the items and performance evaluation of the items with the aim of eliminating items that performed poorly and retaining items that performed desirably for further validation (See Appendix V).

To determine items that would be retained in the scale for further analysis, strategies as suggested by DeVellis (2003), and Curbow, Spratt, Ungaretti, McDonell, and Breckler (2006) were followed. The strategies included assessment of average item scores, standard deviation and corrected item-total correlations. Positive corrected item-total correlations pointed to the fact that the item is presumably measuring a similar concept to other items in the scale or the item shared common variance with the other items in the scale (DeVellis, 2012; Ojedokun, 2016). An inclusion criterion was set to determine the item convergent validity at ≥ 0.40 (Stewart, Hays & Ware, 1998; Westaway & Myburgh, 2007) meaning that any item that has a corrected item total correlation which is less than 0.40 would not be included at the validation stage. Six items were removed from each of the subscales. Clark and Watson (1995) and Nunnally (1978) suggested a minimum reliability estimate of 0.80 for basic research. The items on HLSS showed a high internal consistency of 0.93 for the happiness subscale and 0.94 for the life satisfaction subscale.

At the end of this step, 36 items were retained in the happiness subscale and 41 items were retained in the life satisfaction subscale.

4.7.6 Structural Analysis

Responses to the 42 items of the happiness and 47 items of the life satisfaction subscales were also subjected to factor analysis using the extraction method of the Principal Component Analysis (PCA). The purpose of using PCA was to eliminate unreliable items from further analyses (Malomo, 2012; Tronsmoen, 2008). To reduce the items to a reasonable proportion which can be considered significant for interpretation of results, the researcher set an inclusion criterion at ≥ 0.50 (Nunnally, 1978; Westaway & Myburgh, 2007). The results were 30 items for the happiness subscale and 34 items for the life satisfaction subscale which were considered to have item convergent validity and useful for interpreting results. There are various techniques of extracting the number of factors to be retained from data. The first method is Kaiser 1 rule, which is the extracting the number of factors with an eigenvalue greater than 1 (Kaiser, 1974) and the scree test of percentage of variance. The scree test involves the studying the graph of the eigenvalues and looking for the normal turn or break point in the data where the bend flattens out. The number of data points above the break point is usually the number of factors to be retained.

No ceiling was applied to the number of factors to be estimated in the first run; the HLSS is tilted to unidimensional scale. The initial EFA run resulted in a 10-factor solution in the two subscales which accounted for 59.7% and 59.8% of the variance for happiness and life satisfaction respectively. But a closer look at the table shows eigenvalues of 11.75 (26 items), 2.48 (3 items), 1.24 (1 item) for happiness subscale and 13.65 (31 items), 2.05 (1 item), 1.62 (2 items) for life satisfaction subscale. The rest of the factors did not have any items loaded on them that reached the criterion level of 0.5.

Table 5: Showing Factor Loading and Eigenvalues of HLSS (Happiness Subscale)

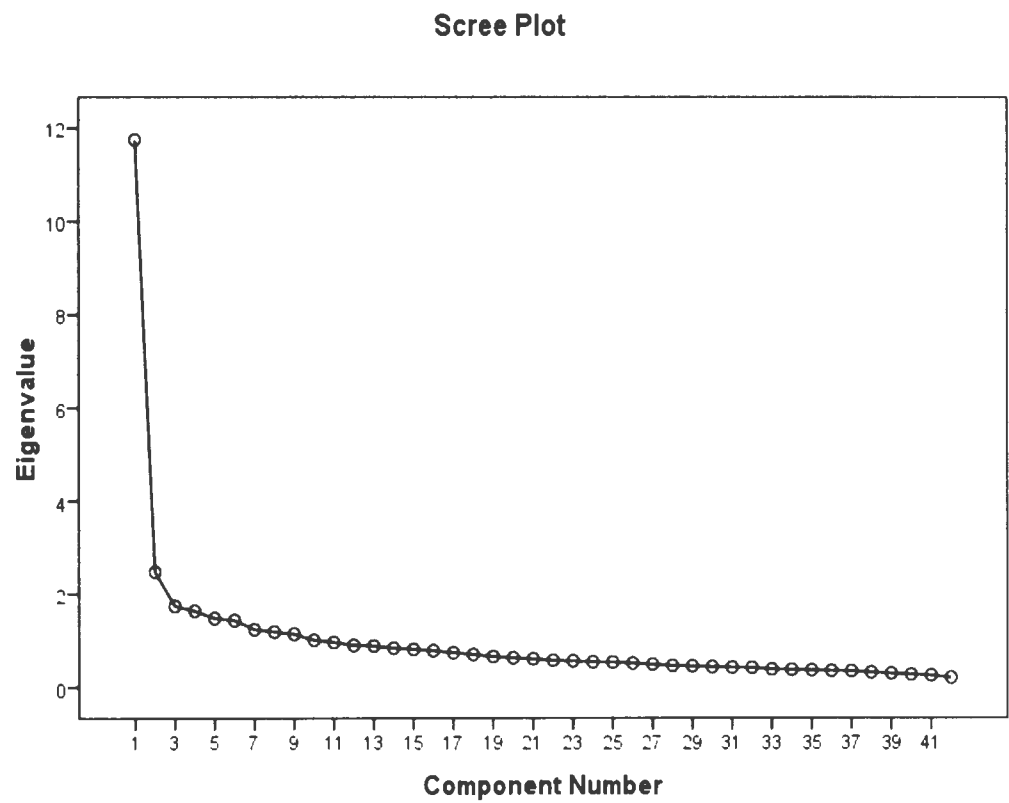
Component	Total	Initial Eigenvalues	
		% of Variance	Cumulative %
1	11.753	27.982	27.982
2	2.477	5.898	33.881
3	1.739	4.139	38.020
4	1.634	3.890	41.910
5	1.477	3.516	45.426
6	1.433	3.412	48.838
7	1.236	2.944	51.781
8	1.186	2.823	54.605
9	1.137	2.708	57.313
10	1.008	2.400	59.712

Table 6: Showing Factor Loading and Eigenvalues of HLSS (Life Satisfaction Subscale)

Component	Total	Initial Eigenvalues	
		% of Variance	Cumulative %
1	13.654	29.051	29.051
2	3.195	6.799	35.849
3	2.051	4.363	40.213
4	1.729	3.679	43.892
5	1.626	3.459	47.351
6	1.349	2.870	50.220
7	1.222	2.600	52.821
8	1.172	2.493	55.314
9	1.116	2.374	57.687
10	1.038	2.209	59.896

While the scree plot shows a two factor loadings, this suggested that factor loadings were strongest on a single factor. The inconsistency between Kaiser 1 rule and scree plot factor loading would be addressed at the validation stage of the study which is the final stage.

Fig 1 The Scree test showing Component of Happiness Subscale of HLSS

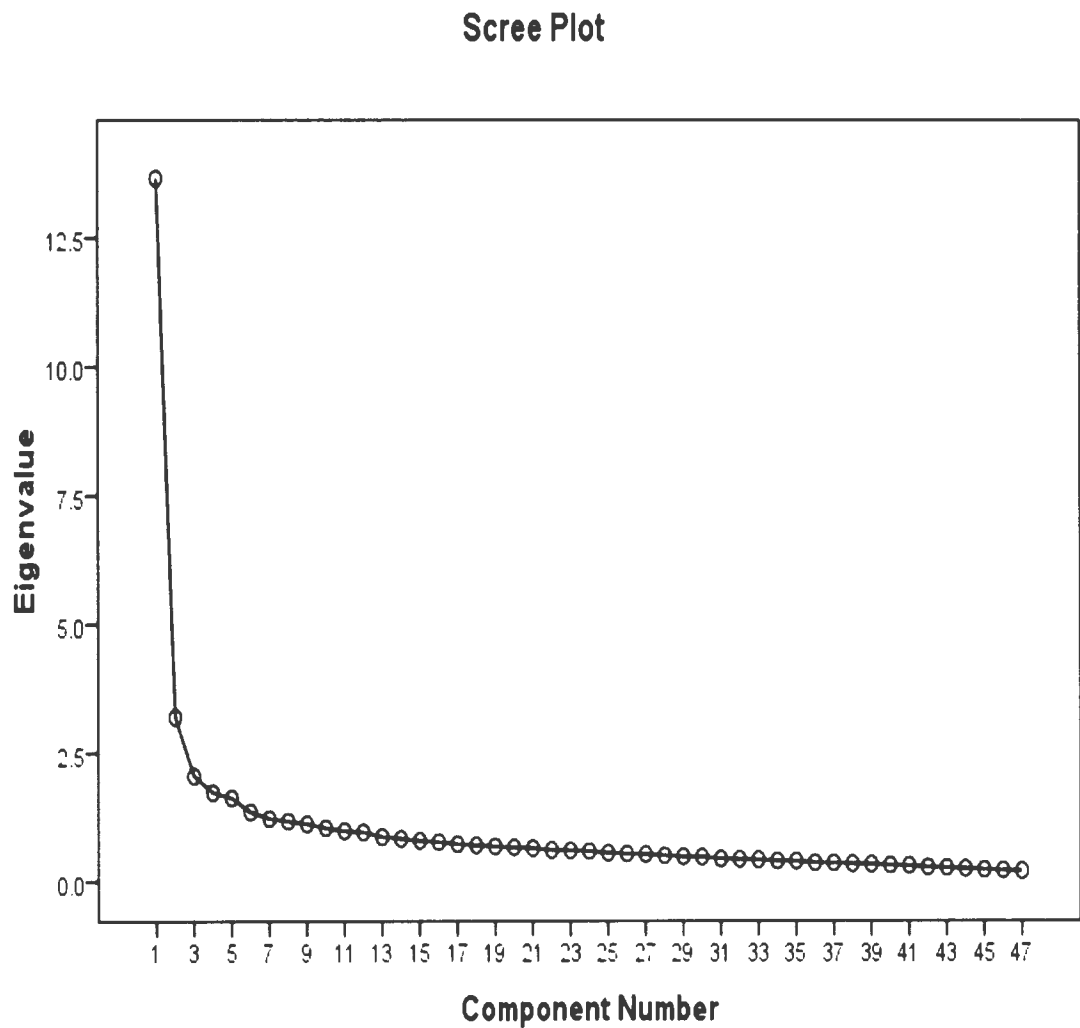


KEY: X axis: Eigenvalue value

 Y axis: Items in the subscale

 The Gradient of the Graph: Shows the data points

Fig. 2 The Scree test showing Component of Life Satisfaction Subscale of HLSS



KEY: X axis: Eigenvalue value

 Y axis: Items in the subscale

 The Gradient of the Graph: Shows the data points

4.8 Procedure for the Study

The study was in three stages: The first stage was item generation, the second stage was the pre-test study and the third stage was the main study.

4.8.1 Item Generation

The first step of the item generation was the review of existing literatures on item development. This was done to determine the methods that were adopted in developing the existing scales on happiness and life satisfaction. This afforded the researcher the opportunity to examine these existing scales and justified the need for development of this scale. Thereafter, Focus Group Discussions (FGDs) were held with adult Africans as participants; this exercise was deemed necessary in order to be able to generate a pool of items for the proposed scale. Four FGDs were conducted within two months. A total of 48 participants who were randomly selected took part in the exercise with the average of 12 participants per session.

4.8.2 Focus Group Discussion Guide

The Focus Group Discussions guide The instrument guided the researcher in moderating the sessions of the FGDs by helping the researcher to obtain the required information and ideas from participants which were used in arriving at the proposed items of the scale. The FGD guide consists of statements although in question form that the researcher posed to the participants. The guide was divided into 2 sections comprising statements or questions, one that dwelled on happiness and the other section on life satisfaction (See Appendix I).

4.8.3 Focus Group Discussions Questionnaire

This Focus Group Discussion questionnaire was distributed to the participants at the beginning of each session of the FGDs after their consent had been sought and confidentiality assurance had been made. The questionnaire was in 3 sections; section A taps demographic information of the participants at the FGDs, while section B contains statements that measure happiness and section C measures life satisfaction. The statements in the two sections are worded

in open ended format; the participants were asked to list 5 items or possessions that constitute happiness or life satisfaction to them. At the beginning of these two sections, a simple definition of happiness or life satisfaction was provided to guide the participants when responding to the questionnaire (See Appendix II). Therefore, the questionnaire served the purpose of complementing the information provided during session of the FGDs. Also, it afforded the participants at the FGDs to note points that came to mind when other co-participants were talking.

4.8.3.1 Procedure for the FGD Sessions

A total number of 48 volunteers were randomly selected to participate in the FGD at each of the project sites. The ballot system of random selection was used in admitting participants to the group discussion. The inscription “YES” and “NO” were written separately on pieces of paper. These papers were folded to prevent participants from seeing what was written on them and kept in a tray. Each of the volunteers was asked to pick one of the papers and was thus admitted or not based on what is reflected on the piece of paper that he or she picked. In this way, the researcher arrived at the number of people who participated in the FGDs.

After familiarisation, explanation of the essence of the research as well as adequate socialisation with the participants, the researcher sought the consent of the participants before proceeding with the session. The researcher also added that any of the participants were free to opt out during the proceedings if the individual felt uncomfortable with the discussions. They were asked to comment freely on what constitutes happiness and life satisfaction. Each of the participants was given an opportunity to respond to what the moderator posed in relation to happiness and life satisfaction unless such participants declined to comment. Each session lasted for one and a half hours.

4.8.3.2. Face Validity

After compilation, another round of FGDs was conducted. At this stage, the researcher presented the proposed items of the scale to the participants to confirm whether those items captured their thoughts as well as the discussion they had at the previous meeting on happiness and life satisfaction. The researcher collected the e-mail addresses of the participants at the two FGDs that were conducted in South Africa, then sent the proposed items to them and nearly all of them responded that the items captured the discussion that was held. This exercise was done in order to establish the face validity for the proposed scale.

4.9 Pilot Study (The second stage)

Nearly all the studies in social sciences make use of a pilot study before the main study. This is because of the important role it plays in research (Baker, 1994). It is on this basis that the pilot study was conducted for this research in order to satisfy these purposes.

First, to field test the research instrument which is the proposed Happiness and Life Satisfaction Scale (HLSS).

Secondly, to test the research processes such as the different ways of distributing as well as collecting the questionnaires. A pilot study is also done to have an idea of what resources (research assistance and finance) are needed for the study and therefore to make adequate preparations to have a successful research work.

Third, to identify practical problems that may be encountered in the main study by assessing whether the research protocol is realistic and workable.

Scholars such as Clark and Watson (1995) and Guadagnoli and Velicer (1988) have argued that it is imperative to use a large and appropriate heterogenous sample for the first major phase of scale development. Consequently, Clark and Watson (1995) recommend a minimum of 300 respondents should be used at this stage.

In arriving at the number of participants to be selected at the second phase of the work, Yaro's (1964) sampling technique formula was used to compute the number of participants needed from 744,734. This figure represents the number of West Africans living in Nigeria (National Population Commission, 2010). This number does not include Nigerians although Nigeria is a member of the West African region. The formula is given as

$$n = \frac{N}{1 + N(e)^2}$$

Where n= sample size

N=Target Population

1= constant

e= (0.05) level of significant

Substituting the figures into the formula, we have

$$n = \frac{744,734}{1 + 744,734(0.05)^2}$$

$$\frac{744734}{1 + 744734(0.0025)}$$

$$n = \frac{744734}{1 + 1861.84}$$

$$n = \frac{744734}{1862.84}$$

$$n = 399.78 \text{ (Approximately 400 will be required as the sample size)}$$

In research like this, there is tendency to have respondents who may not fill in their questionnaire correctly. There is need to adjust for respondents who may not fill the questionnaire correctly. This formula would be applied to adjust for such respondents:

$$\frac{n}{1-f}$$

Where n is the result of the above formula; 1= constant and f = is the % of the people that may not respond to the questionnaire correctly.

$$\frac{n}{1-f} = \frac{400}{1-0.1} = \frac{400}{0.9} = 445$$

In arriving at 445 participants out of 744,734; the researcher used another formula which is the number of people from each of the West African countries living in Nigeria (n) divided by the total number of all West Africans living in Nigeria (N) multiplied by 445 which is the required number of participants for the pilot study. At the end of the computation, countries that have less than 1 were eliminated from the number of countries to be used for the pilot study. Six countries (Ghana, Liberia, Sierra Leone, Benin Republic, Togo and Cameroon) met the above criterion.

4.9.1 Pilot Study Questionnaire and Administration

The questionnaire used for data gathering at this phase of the study was a self developed scale (Happiness and Life Satisfaction Scale) divided into 3 sections. Section A of the proposed scale taps demographic variables of the participants, section B is the happiness subscale, which consists of 42 items with a Likert response format ranging from '5'(strongly agree) to '1' (strongly disagree). The items are worded in the same direction and the score in all the items are added together to arrive at a composite score for each of the respondents.

Section C is the life satisfaction subscale, which consists of 47 items with a Likert response format ranging from '5' (strongly agree) to '1' (strongly disagree). The items are worded in the same direction and the score in all the items are added together to arrive at a composite score for each of the participants (See Appendix V).

450 questionnaires were administered through the help of the research assistants who were recruited and trained for this purpose. These research assistants are from the same country as the intended participants; hence it was easier to get their consent to fill the questionnaire. The whole process of administration took 6 weeks and 420 questionnaires were retrieved from the field. 12 of these questionnaires were not properly filled in and therefore not included.

4.10 Main Study

The main study was carried out in Nigeria and South Africa for adult Africans living in the two countries. A total number of 1468 were sampled for the study through the help of

research assistants that were earlier recruited at stage two and others who were recruited in South Africa. Comrey and Lee (1992) recommend a minimum sample size in factor analysis; they specified a sample size of more than 500 is very good, while a sample size of 1000 or more is excellent (Moss, Lawson, White, & the Appearance Research Collaboration, 2015). For this study, a sample of 1468 would be an ideal. Over 2000 questionnaires were administered and it took 4 months to complete the whole exercise. 1650 questionnaires were retrieved from the field. 182 of these questionnaires were not properly filled in and were screened out during the process of data cleaning, therefore they are not included in the analysis.

4.11 Ethical Considerations

The study was accepted by the Ethical committee of the NorthWest University, Mafikeng Campus, Mmabatho, South Africa with the approval number NWU-00491-15-A9. Issues such as voluntary participation, informed consent, confidentiality and privacy were taken into consideration during the administration of the questionnaire as well as the sessions of the FGDs. This made all the participants cooperate fully at every stage of the research.

4.12. Data Analysis

Correlation analysis, exploratory factor analysis and confirmatory factor analysis were used to analyse the data gathered at each stage of the research. The confirmatory factor was performed using the Structural Equation Modelling (SEM) in Analysis of Moment Structures (AMOS, version 22), using Maximum Likelihood (ML) estimation to evaluate the structural validity of HLSS. Correlational analysis and exploratory factor analysis were performed using SPSS version 20.

CHAPTER FIVE

RESULTS

This chapter presents the results of the analyses of data collected at the validation or main study.

5.1. Convergent and Discriminant Validities

Convergent and discriminant validities were established for HLSS. The two sets of validity were achieved by correlating the two subscales of HLSS with a scale that measures a supposedly similar construct to determine the convergent validity as well as a scale that measures a different and unrelated construct to determine the discriminant validity. In essence, HLSS was correlated with the social health inventory by Njoku (2012) and Zung's (1965) depression scale.

Hypothesis 1

Hypothesis 1 states that happiness subscale of HLSS would discriminate those who are happy from those who are not happy.

Hypothesis 3

Hypothesis 3 states that that there would be a significant positive correlation between the happiness subscale of HLSS with scale measuring similar concept.

Table 7: Showing the Convergent and Discriminant Validities for Happiness Subscale

Variables	1	2	3
1. Happiness Subscale			
2. Depression Scale	-0.216**		
3. Social Health Inventory	0.379**	-0.312**	

***Coefficient significant at the 0.01 level (2-tailed)*

The table 7 above shows that the happiness subscale of HLSS is negatively correlated with a depression scale by Zung (1965); $r(1466) = -0.22$. Though, the relationship is not high but the value is high enough to reach a significant level even at $p < .01$. Also, the happiness subscale of HLSS is positively correlated with social health inventory by Njoku (2012); $r(1466) = 0.38$; the

value is also significant at $p < .01$. A closer look at the table shows that the depression scale and the social health inventory are negatively correlated with $r(1466) = -0.32$; $p < .01$. The implication of the above results is that the happiness subscale has both convergent and discriminant validities. It also means that the happiness subscale can discriminate individuals who are happy from individuals who are not happy because respondents that scored high on the happiness subscale of HLSS scored low on the Zung depression scale. Also respondents that scored high on the happiness subscale, scored high on the social health inventory.

Hypothesis 2

Hypothesis 2 states that the life satisfaction subscale of HLSS would discriminate those who are satisfied with life from those who are not satisfied with life.

Hypothesis 4

Hypothesis 4 states that there would be a significant positive correlation between the life satisfaction subscale of HLSS with a scale measuring a similar concept.

Table 8: Showing the Convergent and Discriminant Validities for Life Satisfaction Subscale

Variables	1	2	3
1. Life Satisfaction Subscale			
2. Depression Scale	-0.283**		
3. Social Health Inventory	0.473**	-0.312**	

***Coefficient significant at the 0.01 level (2-tailed)*

From the table 8 above, the life satisfaction subscale has discriminant validity because there is an inverse relationship between the subscale and Zung depression scale; $r(1466) = -0.28$ and it is significant at $p < .01$ level of confidence. This shows that the life satisfaction subscale can discriminate between people who are satisfied with their life from those who are not satisfied with their life. Furthermore, the life satisfaction subscale was found to be directly related with the social health inventory; $r(1466) = 0.47$ which is significant at $p < .01$ level of confidence. Again, the Zung (1965) depression scale and Njoku (2012) social health inventory were

inversely related; $r(1466) = -0.312$. The implication of these results is that the life satisfaction subscale has both convergent and discriminant validities; that it can discriminate between people, that is to say that individual who score high on the life satisfaction subscale would score high on other associated constructs.

Wang, French, and Clay (2015) assert that there are multiple aspects of construct validity (convergent and discriminant validities) that require evaluation using various methods to develop and maintain a strong validity argument and one cannot rely on a single method of achieving this validity. It is against this background that the study proceeded to apply another method of establishing construct validity, which is structural validity, by using exploratory factor analysis and confirmatory factor analysis. This is in accordance with Messick (1995), who asserts that there are 6 features of construct validity: content, substantive, structural, generalizability, external and consequential aspects of construct validity.

5.2.1 Internal Consistency for Happiness Subscale

In preparation for the computation of both exploratory factor analysis and confirmatory factor analysis, another round of internal consistency was performed for both the happiness subscale and life satisfaction subscale of HLSS. The Cronbach's alpha coefficient for the 30 item happiness subscale yielded 0.914 and the corrected item-total correlation ranged from 0.179 to 0.609. An exclusion/inclusion criterion was set as $\geq .40$ for an item to be included in the scale. Any item with a corrected item-total correlation less than 0.40 would be eliminated from the scale (Stewart *et al.*, 1988; Westaway & Myburgh, 2007). As a result of this criterion, items 1, 2 and 23 were deleted from the scale (See Appendix VIII). Another round of Cronbach alpha was computed for the remaining 27 items of the happiness subscale. The new Cronbach alpha yielded 0.916 and the corrected item-total correlation ranged from 0.445 to 0.610. All the 27 items meet the exclusion/inclusion criterion set above (See Appendix IX).

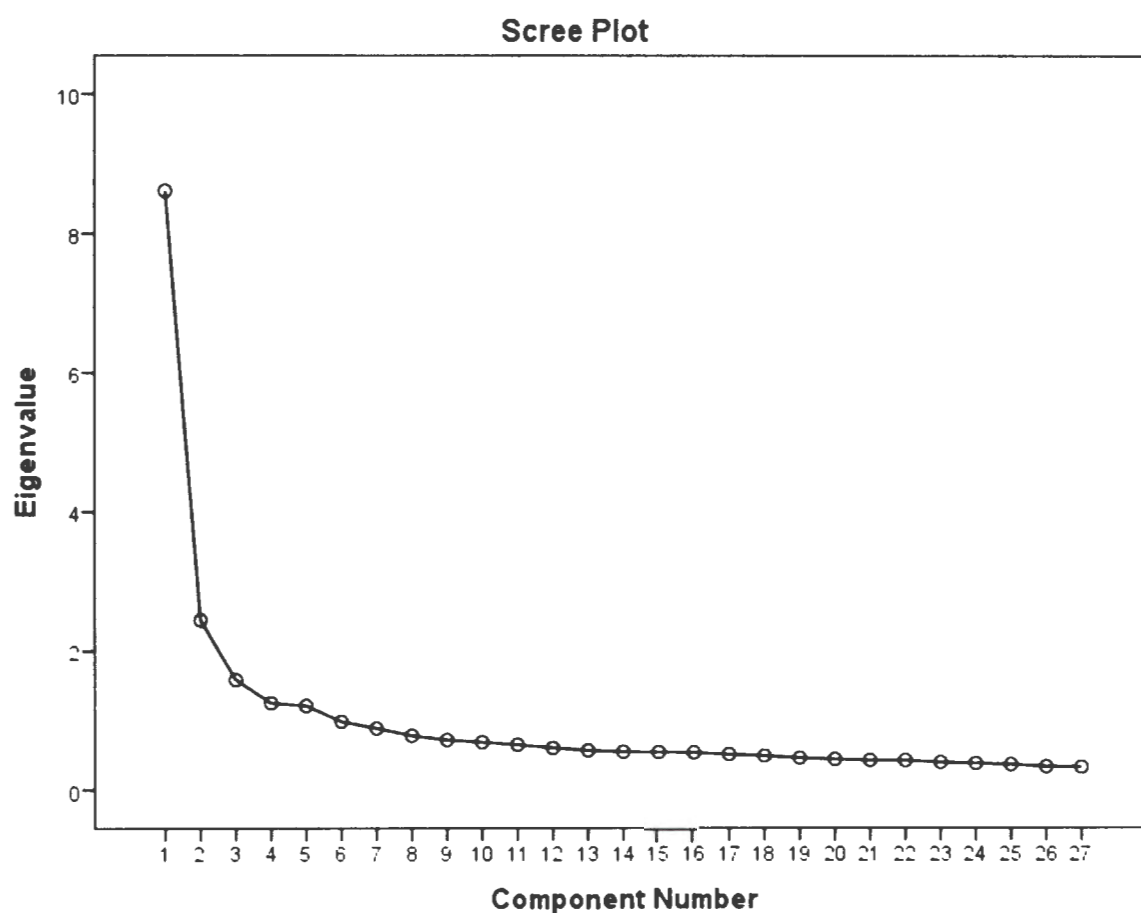
5.2.2 Exploratory Factor Analysis for Happiness Subscale

The 27 items happiness subscale was subjected to factor analysis using the extraction method of principal component analysis (PCA) which was recommended by Cortina (1993). The PCA yielded 5 factors, using the criterion set by Clark and Watson (1995) and Hair, Anderson, Tatham, and Black (1998), which is 0.40 for retaining any item in the scale; such an item must not be cross-loaded on another factor. If an item cross-loaded, such an item would be deleted. Four items were deleted for cross-loading; these items were items 3, 9, 17 and 18. The remaining 23 items were loaded on the first factor (See Appendix X). This makes the happiness subscale a unidimensional subscale that would be subjected to confirmatory factor analysis.

5.2.3 Scree Test for Happiness subscale

An alternate test for factor extraction and retention is the scree test. It entails examining the eigenvalues and there is a normal bend or break point in the graph where the curve flattens out. The number of data points above the break (not including the point at which the break occurs) is usually the number of factors to be retained.

Figure 3: The Scree test for the Happiness Subscale



KEY: X axis: Eigenvalue value
Y axis: Items in the subscale
The Gradient of the Graph: Shows the data points

Taking a closer look at the scree test above, the number of data points above the break seems unclear, because the break point is not distinct as expected. Therefore, the data will be tested further with confirmatory factor analysis.

5.2.4 Confirmatory Factor Analysis for Happiness Subscale

The Structural Equation Model (SEM) was applied to test the unidimensionality of the happiness subscale. The result of the SEM shows a $\chi^2 = 5420.48$, $df = 524$, $p < .001$. The Chi-square (χ^2) value is not supposed to be significant for a good model fit because χ^2 is very

sensitive to larger samples which can produce a big χ^2 value that is more likely to be significant. Furthermore, it is difficult to get a non-significant χ^2 when the sample size is well above 200. The chi-square test also presumes multivariate normality and severe deviation from normality may result in model rejections even when the model is properly specified (Hooper, Coughlan, & Mullen, 2008; McIntosh, 2006). Despite these inadequacies about χ^2 , scholars (Hayduk, Cummings, Boadu, Pazderka-Robinson, & Boulianne, 2007; Hooper, *et al.*, 2008; Kline, 2005) agree that it is essential to report model chi square.

Many scholars have also advocated various combinations of fit indices. For instance, Hu and Bentler (1999) suggest a two index presentation format of standardised root mean squared residual (SRMR) with any non-normed fit index (NNFI), or root mean squared error of approximation (RMSEA) or the comparative fit index (CFI). Kline (2005) advocates the use of Chi square test, the RMSEA, the CFI and the SRMR. Hooper *et al.* (2008) recommend Chi square, the RMSEA, the SRMR, the CFI and one parsimony fit index such as parsimony normed fit index (PNFI) while Hair, Black, Babin, and Anderson (2010), and Mark and Sockel (2001) suggested that at least one absolute fit index and one incremental fit index can be reported in addition to the chi-square and its associated degree of freedom.

There is no consensus among the scholars regarding the indices that best describe the fit but SRMR stands out and cuts across all the recommendations or suggestions made by scholars. This shows that SRMR is the most reliable among these indices. Hooper *et al.* (2008) assert that it is not good practice to use the indices that are frequently used because some of these statistics are often relied on purely for historical reasons rather than for their sophistication. Crowley and Fan (1997) opine that there are no agreed rules on type of model fit but reporting a variety of indices is important. It is against this backdrop that this study chooses to report the chi-square with its degree of freedom, SRMR, PRATIO, PNFI and PCFI. The cut off criterion for SRMR is (SRMR < .08) suggested by Browne and Cudeck (1993) and Hu and Bentler (1998), while no

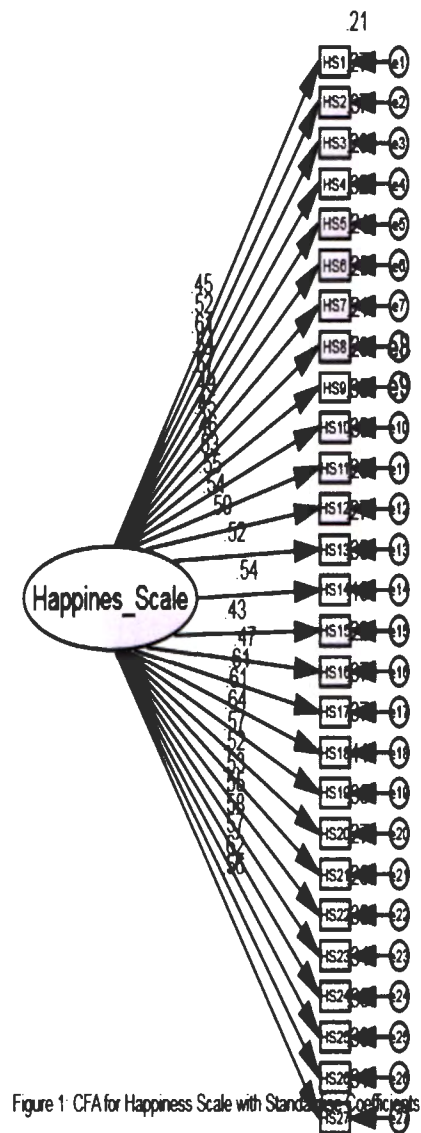
criterion is set for PRATIO, PNFI and PCFI but Hooper *et al.* (2008) and Mulaik, James, Van Alstine, Bennet, Lind, and Stilwell (1989) note that any value above >.5 is acceptable. In this model, all the 23 items loaded on a single factor. The model shows a good a fit (Df =324, χ^2 = 5420.482; $p < .000$; SRMR = .065; PRATIO = .923; PNFI = .602; PCFI = .615).

Table 9: Showing Summary of the CFA solution for the one factor model of Happiness Subscale

Model fit index	Observed Value	Desired Value	Remark
χ^2 (df, p)	5420.482(324, $p < .000$)	$P > 0.05$	The model is rejected
SRMR	.065	SRMR < 0.08	Good model fit
PRATIO	.923	PRATIO > 0.50	Good model fit
PNFI	.602	PNFI > 0.5	Good model fit
PCFI	.615	PCFI > 0.5	Good model fit



Figure 4: CFA for Happiness Subscale with Standardised Coefficients



The values shown on the paths between the items and happiness scale represent standardise coefficient; which indicates a one-factor structure.

5.3.1 Internal Consistency for Life Satisfaction Subscale

A similar procedure was adopted for the life satisfaction subscale, that is the Cronbach alpha yielded 0.939 and the corrected item-total correlation ranged from 0.348 to 0.613. The inclusion/exclusion criterion was set for ≥ 0.40 (Stewart *et al.*, 1988; Westaway & Myburgh, 2007). Items 7 and 28 did not meet the criterion set and they were deleted (See Appendix XI). The remaining 32 items were subjected to another round of item analysis with Cronbach alpha of 0.94 and corrected item-total correlation ranging from 0.47 to 0.61. All the 32 items of the life satisfaction subscale meet the criterion ≥ 0.40 set by Stewart *et al.* (1988) and Westaway and Myburgh (2007).

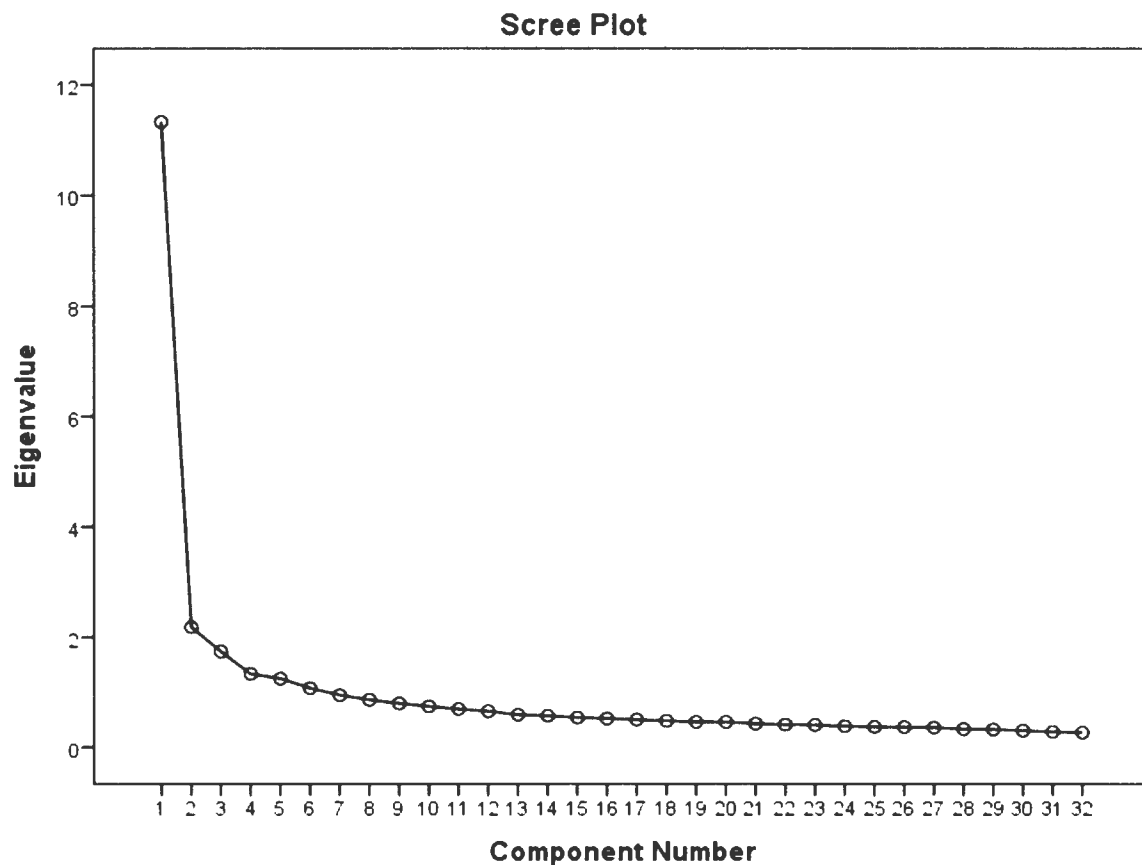
5.3.2 Exploratory Factor Analysis for Life Satisfaction Subscale

Exploratory factor analysis was performed on the 32 items of the life satisfaction subscale; the PCA yielded 5 factors. Clark and Watson (1995) and Hair, *et al.*, (1998) state that items to be retained in the scale must have a minimum loading coefficient of 0.40 and the item must not be cross loaded on another factor. Therefore, items 1, 2, 3, 4 and 24 were deleted from the items that make up the life satisfaction subscale. The 28 items left are loaded on the first factor of the scale (See Appendix XII); this makes the scale to be susceptible to unidimensional scale which would be tested with confirmatory factor analysis.

5.3.3 Scree Test for Life Satisfaction Subscale

Scree test is an alternative method of extracting and retaining factors in exploratory factor analysis. It entails studying the graph of the eigenvalues and checking for the break point on the curve where it flattens out. The number of points above the break point becomes the number of factors to be retained in the scale. This does not include the point at which the break occurs.

Figure 5: The Scree test for Life Satisfaction Subscale



KEY: X axis: Eigenvalue value
Y axis: Items in the subscale
The Gradient of the Graph: Shows the data points

Taking a closer look at the scree test above, the number of data points above the break seems unclear, because the break point is not distinct as expected. Therefore, the data will be tested further with confirmatory factor analysis.

5.3.4 Confirmatory Factor Analysis for Life Satisfaction Subscale

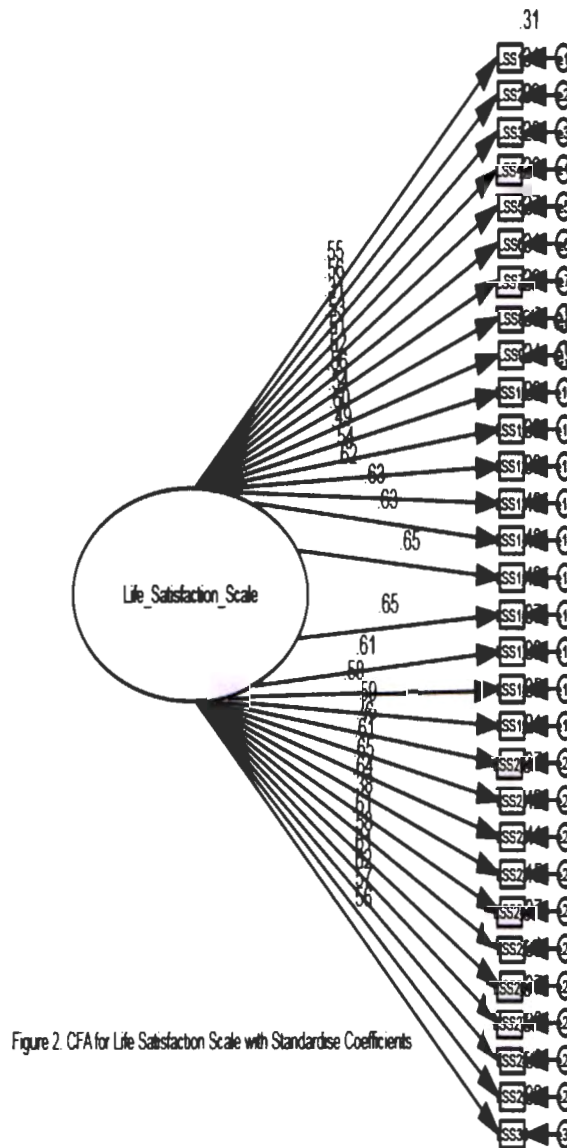
The CFA was used to test the unidimensionality of the life satisfaction subscale. Model fit was assessed in accordance with the explanations as well as recommendations made by

different scholars regarding the various fit indices associated with CFA analysis. There is no consensus among the scholars regarding the indices that best describe the fit and Hooper *et al.* (2008) assert that it is not a good practice to use the indices that are most frequently used because some of these statistics are used based on historical reasons rather than for their sophistication. Therefore, the same set of indices used in assessing the model fit of happiness subscale would be used to measure the model fit of life satisfaction subscale. The indices are chi square with its degree of freedom, SRMR, PRATIO, PNFI and PCFI. The cut off criterion for SRMR is (SRMR < .08) by Browne and Cudeck (1993) and Hu and Bentler (1999), while no criterion is set for PRATIO, PNFI and PCFI but Hooper *et al.* (2008) and Mulaik *et al.* (1989) note that any value above .05 is acceptable. All the 28 items loaded on a single factor. The model shows a good a fit (Df =405, $\chi^2 = 6053.157$; $p < .000$; SRMR = .059; PRATIO = .931; PNFI = .644; PCFI = .657).

Table 10: Showing Summary of the CFA solution for the one factor model of Life Satisfaction Subscale

Model fit index	Observed Value	Desired Value	Remark
χ^2 (df, p)	6053.157(324, $p < .000$)	$P > 0.05$	The model is rejected
SRMR	.059	SRMR < 0.08	Good model fit
PRATIO	.931	PRATIO > 0.50	Good model fit
PNFI	.644	PNFI > 0.5	Good model fit
PCFI	.657	PCFI > 0.5	Good model fit

Figure 6: CFA for Life Satisfaction Subscale with Standardised Coefficients



The value shown on the paths between the items and life satisfaction represent standardised coefficient which indicates a one-factor.

CHAPTER SIX

DISCUSSION OF FINDINGS AND CONCLUSION

This chapter focuses on the discussion of the research findings after the analysis of data collected. The chapter also includes the implications of the study, strengths as well as limitations of the study and conclusion at the end of the work.

6.1 Discussion

The analyses of data collected in the course of this study yielded results which were presented in the previous chapters. The psychometric properties of the HLSS were established through various methods which were documented in the literature. Bohrnstedt (1983) describes the significance of establishing psychometric properties of a scale. Bohrnstedt (1983), cited in Ojedokun (2015) adds that validity and reliability are essential in establishing the usefulness of a scale. Reliability of happiness subscales and life satisfaction subscales was assessed using the internal consistency approach, which is the most commonly used technique in item selection (Clark & Watson, 1995). Internal consistency is expressed by way of a reliability coefficient such as Cronbach's alpha (α) (Cronbach, 1951). Hence, a scale is said to be reliable if the items are highly intercorrelated, suggesting that items are assessing a similar concept (DeVellis, 2011; Ojedokun, 2015). Scholars such as Clark and Watson (1995) and Hair *et al.* (1998) have proposed different acceptable levels for the coefficient alpha (α). Clark and Watson (1995) recommended an alpha coefficient of 0.80 while Hair *et al.*, (1998) set a threshold of 0.70 as a good coefficient for internal consistency reliability.

Furthermore, internal consistency was estimated by item-total correlations. The item-total correlation is the correlation of each item in the scale with the summation of other items score. Many scholars (Clark & Watson, 1995; Hair *et al.*, 1998; Stewart *et al.*, 1988) agreed that any item with a correlation coefficient below 0.40 should be deleted from the scale.

This study also adopted different methods of assessing validity ranging from face validity, content validity, discriminant validity, convergent validity and structural validity. All these forms of validity are geared towards ensuring that both the happiness and life satisfaction subscales of the HLSS measure what they suppose to measure (Hinkin, 1998). Face and content validities were incorporated into the test development procedure following the template set by Clark and Watson's (1995) scale development guidelines.

Discriminant validity is based on the premise that a scale should not correlate with the scale of other constructs (Diener *et al.*, 2012). In practice, discriminant validity indicates that a happiness subscale or life satisfaction subscale correlates with other scales of similar constructs at high levels, also with scales of other or different constructs at lower levels (Diener *et al.*, 2012). Hypothesis 1 stated that the happiness subscale of HLSS would discriminate respondents who are happy from respondents who are not happy. Hypothesis 2 stated that the life satisfaction subscale of HLSS would discriminate those who are satisfied with life from those who are not satisfied with life. The results revealed that the two subscales of HLSS (Happiness and Life Satisfaction) can discriminate between respondents who are happy and respondents who are not happy as well as between respondents who are satisfied with life and respondents who are dissatisfied with life. The results are in consonance with the studies of Abdel-Khalek (2004), Diener *et al.* (1985), Lucas, Diener, and Suh (1996), and Pavot and Diener (1993a), who all established discriminant validity by correlating scores on a happiness scale or Satisfaction With Life Scale (SWLS) with scores on unrelated personality constructs in their respective studies. This strategy was adopted in this study and the findings showed that there is a significant negative correlation between the happiness subscale of HLSS and depression, also there is a significant negative correlation between the life satisfaction subscale of HLSS and depression (See Table 7 & 8). For instance, Abdel-Khalek (2004) utilized a three stage approach similar to that which was adopted in the present study, and correlated the Kuwait University anxiety scale:

with a self-rated happiness scale among 2,584 secondary school students. Abdel-Khalek's (2004) study shows a negative relationship between happiness and anxiety. Abdel-Khalek (2004) used adolescents as the participants in his study while the participants in this study are adult Africans, but the result still showed a negative correlation between happiness and other unrelated personality constructs such as anxiety and depression. Furthermore, Diener *et al.* (1985) also used a three phase approach and correlated the scores on the Satisfaction With Life Scale with scores on neuroticism scale by Eysenck and Eysenck (1964), symptom checklist by Derogatis, Lipman Rickels, and Covi (1974), emotionality and impulsivity scale in Buss and Plomin's (1975) appraisal of the temperaments (EASI-III) using 163 undergraduate students as participants. Diener *et al.* (1985) reported a negative correlation between scores on the Satisfaction With Life Scale and scores on neuroticism, symptom checklist, emotionality and impulsivity, just like the present study.

Hypothesis 3 stated that there would be a significant positive correlation between the happiness subscale of HLSS with a scale measuring a similar concept. Hypothesis 4 stated that there would be a significant positive correlation between the life satisfaction subscale with a scale measuring a similar concept. Convergent validity was estimated by correlating the happiness subscale and the life satisfaction subscale of HLSS with a scale that measures concepts that are similar to happiness and life satisfaction. In this case, happiness and life satisfaction subscales were correlated with the Social Health Inventory by Njoku (2012); the Social Health Inventory measures our interaction with other people and how we function in our social world. The results showed that the happiness subscale of HLSS converged with Social Health Inventory, and the life satisfaction subscale of HLSS also converged with the Social Health Inventory. These results are in consonance with the studies of Diener *et al.* (1985), Hervas and Vazquez (2013), Lucas *et al.* (1996), Pavot *et al.* (1991), Pavot and Diener (1993a), Ungerer and Strasheim (2011), and Van Beuningen (2012), who have established

convergent validity by correlating scores on the Satisfaction With Life Scale with other related scales. The same method was utilised in this study, and the results showed a significant positive correlation between the happiness subscale of HLSS and the Social Health Inventory, and there is a significant positive correlation between the life satisfaction subscale and the Social Health Inventory (See Table 7 & 8). A similar result was obtained by Diener *et al.*'s (1985) study which adopted a three phase approach and correlated the scores on the Satisfaction With Life Scale with scores on other subjective wellbeing measures. These measures included Cantril's (1965) Self anchoring ladder, Guring *et al.*'s (1960) single item scale, Andrews and Withey's (1976) D-T scale, and Fordyce's (1978) single item measure of happiness. The participants were 163 undergraduate students and the results showed positive correlations as were also obtained in this study.

Van Beuningen's (2012) study used the Dutch version of the Satisfaction With Life Scale with 3,402 respondents. The study was designed in four stages and the Dutch version of SWLS was compared with a one item scale of global life satisfaction to establish the convergent validity. Hervas and Vazquez (2013) reported that the Pemberton Happiness Index showed a consistent format of correlations with other related scales that cover different aspects of wellbeing, which range from the Satisfaction With Life Scale by Diener *et al.* (1985), Subjective Happiness Scale by Lyubomirsky and Lepper (1999) and satisfaction with domain of life by Pavot and Diener (2008). Pemberton Happiness Index was positively correlated with all these domains of wellbeing. The standardisation sample for the study was drawn from America (USA & Mexico), Europe (Spain, Germany, Sweden & Russia) and Asia (Turkey, India & Japan) with a total number of 4,407 participants. The selected sample was heterogenous in terms of sex, socioeconomic status, educational level and religious affiliation. This robust standardisation sample is one of the hallmarks of the present study.

Due to the uncertainty regarding the internal consistency estimation as a method of deciding whether a scale is unidimensional (a situation where all items in the scale are measuring a similar construct) or multidimensional, it was strongly recommended that a test developer should begin by factor analysing the items (Briggs & Cheek, 1986; Comrey, 1988; Cortina, 1993; Floyd & Widaman, 1995).

Therefore researchers applied exploratory factor analysis (EFA) either at the preliminary phase of the scale development or at the end of the scale validation. All these efforts are geared towards having a good structural validity. Diener *et al.* (1985), Moghnie and Kazarian (2011), Van Beuningen (2012), Westaway and Maluka (2005), Westaway, Maritz, and Golele (2003), Westaway and Myburgh, (2007) and Wissing *et al.* (2012), used exploratory factor analysis in their study either in scale development or when revalidating an existing scale. Krapu *et al.* (2006) developed and standardised the Life Satisfaction Survey Scale, using 286 participants with an age range of 19 – 79 years. The EFA yielded 6 factors. Mahadea (2013) in his study used 220 South Africans which consisted of black, Indian, white and coloured participants. The EFA yielded 7 components. The analysis has proven to be extremely useful in the development and standardisation of scales.

EFA cannot compute standard errors, which makes confirmatory factor analysis to be preferable. Also confirmatory factor analysis (CFA) assesses both the internal and external consistencies of a scale. CFA does provide a stricter interpretation of unidimensionality that cannot be provided by less powerful traditional methods such as Cronbach alpha coefficient, item-total correlation and exploratory factor analysis (Gerbing & Anderson, 1988). Hence, Chen, Tsai, and Chen (2010), Henderson, Knight and Richardson (2014), Hultell and Gustavsson (2008), Patterson, Dulmus, Maguin, and Fava (2014), and Yu and Hsu (2013) used CFA to determine structural validity in their respective work. Hultell and Gustavsson's (2008) sample consisted of 2,966 student teachers who participated in a study that aimed to revalidate the

Satisfaction With Life Scale among Swedes. The result of the CFA showed a unidimensional model fit. Yu and Hsu (2013) adopted a 3-stage approach in the validation of the Cyberspace Positive Psychology Scale. 411 college students were selected from four Taiwanese Universities. The results showed a good fit model and this shows the contribution of this analysis to scale development, especially unidimensionality of scales.

But Thompson (1997) reported that researchers using CFA many times overlook examining the whole factor pattern and structure. This practice can result in exclusion of some vital information relating to the item analysis of a scale (Raubenheimer, 2004). The use of EFA as a precursor to further investigation of factors was advocated by Gerbing and Hamilton (1996). As a result of this, researchers such as Beretvas and Kearney (2003), Joshanloo (2013), Ojedokun (2015), Ojedokun (2016), Simsek and Kocayoruk (2013), and Wissing *et al.* (2012) adopted a strategy of using the two analyses together (EFA & CFA) in a study. Moss *et al.*'s (2015) study had two categories of participants (614 community participants and 651 clinical participants). Community participants were selected through advertisements and general practice doctors' surgeries. The clinical participants were selected through outpatient clinics from various locations across the United Kingdom. EFA and CFA were used to analyse the data collected in the study. In their (2012) study, titled Validation of three Setswana scales for psychological wellbeing, Wissing *et al.* made use of a two stage approach. The first stage was a pilot study which involved initial assessment of a selected questionnaire for understanding and response format as well as initial assessment of the translated scales. Stage two of the work involved a group of 738 Setswana speakers with ages ranging from 15 to 65 years. Concurrent and convergent validities were determined, which was followed by EFA which yielded three components (comprehensibility, manageability & meaningfulness). These were subjected to confirmatory factor analysis and the three factors were a highly satisfactorily fit. This present research therefore benefitted from the contributions of the two analyses because they

complement each other in ensuring that the best items are retained in the two subscales of HLSS (See Table 8 & 9).

In the development and validation of HLSS, all the strategies mentioned above were followed based on the guidelines provided in literature. Face and content validities were established and built into the process of developing the two subscales. Then discriminant and convergent validities were computed (See Table 7 & 8). Item analysis was conducted for the subscales of HLSS; the internal consistency coefficients were very high and an item-total correlation coefficient was used to eliminate items that did not measure up to the threshold value. EFA and CFA were used to assess the dimension of the scale using a structural equation model to analyse the remaining items (See Table 9 & 10). With all these methods adopted, HLSS has answered the research questions as well as being able to test the four hypotheses which stated that the HLSS (life satisfaction subscale) can discriminate between respondents who are satisfied with their life from respondents who are not satisfied and at the same time shows a positive relationship with scales measuring other domains of subjective wellbeing. Again, HLSS (happiness subscale) would be able to differentiate respondents who are happy from respondents who are not happy with their life, and which also shows a positive correlation with other scales measuring other domains of subjective wellbeing.

6.2 Conclusion

The results of the study revealed that the happiness subscale and life satisfaction subscale of HLSS have acceptable levels of reliability and validity. The findings of the study showed that Africans define happiness and life satisfaction differently from people who live in the Western world where most of the existing scale were developed. These differences formed the basis for generating the items that make up the two subscales of HLSS. Also the scale revealed that the two subscales are unidimensional (See Figure 4 & 6). When scale is unidimensional, the scores

are technically valid and their meaning is unambiguous because the researcher is sure of what the scores represent.

Unidimensionality of scale is a basic requirement for interpreting scores on the scale. Hence, scores on HLSS is devoid of any influence from other variables. The scale can be used to assess happiness and life satisfaction among Africans and it would be precise in its measurement. The discriminant aspect of the two subscales has been proven through various methods of measuring validities that were established in the study, which confirm that the happiness subscale can discriminate between happy and unhappy respondents and the life satisfaction subscale can discriminate between respondents who are satisfied from those who are not satisfied with their lives. The scale can serve as comparable tool among Africans because it represents a common parameter for assessing our subjective wellbeing. These findings have contributed to the existing literature on subjective wellbeing by providing a reliable and valid basis for assessing happiness and life satisfaction among adult Africans. The scale would pave the way for African researchers to investigate the area of subjective wellbeing because there is a paucity of research in Africa. It would also set an agenda for cross cultural researchers on what makes an African happy despite all the barrage of problems facing the continent. The scale would be able to solve this riddle and bring to the fore other factors that Africans consider to be relevant to happiness and life satisfaction, which are not considered by Westerners.

Although people are of the opinion that there are differences between Eurocentric ideas and Afrocentric ideas, they did not know that these differences do extend to happiness and life satisfaction. Scholars use Eurocentric parameters on happiness and life satisfaction to evaluate Africans and conclude that Africans are way down the ladder of happiness and life satisfaction. Lastly, the scale would give African researchers the opportunity to tell their story in an African way.

6.3 Recommendations

The Happiness and Life Satisfaction Scale can be used to provide a platform for cross country comparison in Africa. Through this measurement, comparison can be made between countries since the scale is relevant to all Africans.

The scale can be used to identify the categories of people who are experiencing the best or worst life thereby providing information to policy makers in situations where comparison needs to be made between the populations.

The scale can be used to provide information on factors that contribute to people's wellbeing. This scale would help to improve the quality of life of Africans by identifying factors that are related to their wellbeing.

Happiness and life satisfaction scores can be used to complement other socioeconomic indicators such as gross domestic product. These indicators will assist government in planning and executing projects which have the potential of improving the quality of people's life.

Psychologists and other aligned professionals will find the scale useful because they can make accurate assessment regarding the level of happiness and life satisfaction of their clients so that necessary intervention can be provided.

International Agencies such as the United Nations (UN), the Africa Union (AU), the United Nations Education and Scientific Commission (UNESCO) and other agencies that are concerned with the welfare and health of Africans especially vulnerable groups who are living in the war-torn countries.

Comparison on happiness and life satisfaction can be made with different regions, countries and societies within the African continent. Through the help of this scale, proper planning and social integration can be made possible.

The HLSS will enable Cross-cultural researchers to appreciate the relativity in the conceptualisation of happiness and life satisfaction.

6.4. Implication for Findings

The findings of this study have many implications which can be grouped into the following headings

6.4.1 Practical Implications

The scale will contribute to existing literature on subjective wellbeing by providing an avenue and a reliable method of assessing happiness and life satisfaction among Africans. Therefore, the present endeavour might be the first effort at developing and validating the Happiness and Life Satisfaction Scale using an indigenous African sample. It will also contribute to existing literature on happiness and life satisfaction through the analysis of the factors or values that Africans place credence on which are relevant to their subjective wellbeing. The scale will be used to measure happiness and life satisfaction among Africans in order to have insight into factors they consider as important to happiness and life satisfaction. The scale will correctly assess happiness and life satisfaction among Africans because it is an indigenous scale and also takes into cognisance Africa culture. The scale will confirm the cultural relativity of factors influencing subjective wellbeing.

6.4.2 Theoretical Implications

The findings have implications for measuring happiness and life satisfaction from the viewpoint of self determination theory. The contribution of this study to the existing knowledge in subjective wellbeing is that individuals are motivated to satisfy their needs within the context of their environment. The environment presents various challenges to individuals that are striving to meet their needs so that they can achieve the desired outcome, which is high subjective wellbeing. This implies that the environment is an important element in our attempt to gratify these needs. This makes the process of needs satisfaction relative; hence the scale for measuring this outcome should be relative to the environment. These environmental challenges

can be in form of values, belief system, limitations as well as opportunities that abound within a particular social group.

6.4.3 Methodological Implication

Previously scale developers used exploratory factor analysis to determine the structural validity of their scale while others used confirmatory factor analysis. But this study followed the guidelines of Clark and Watson (1995) which suggested the combination of both exploratory factor analysis and confirmatory factor analysis in scale development. The unique contribution of this study to the scale development is that this study used a structural equation model to arrive at various confirmatory factor analysis indices used in interpreting the unidimensionality of the happiness and life satisfaction scale.

6.5 Suggestion for Future Research

Research of this magnitude cannot be exhaustive; many areas of research are awaiting the attention of researchers who are interested in subjective wellbeing among Africans. Firstly, there is a need to have a specific norm for all the age groups that make up the adult population. The scale can be standardised in the different regions of Africa, to see whether the same result can be obtained.

The HLSS can be standardised among Africans living in diaspora to know whether they are still Africentric or have become Eurocentric. Cross-cultural Psychologists can validate the HLSS among people living in the developed countries to check how they would perform on the scale.

The scale can be translated to the major languages used in Africa and check whether the same results can be obtained.

Lastly, research is needed to examine what influence other factors which have been documented in the literature would have on happiness and life satisfaction using the Happiness and Life Satisfaction Scale as an instrument of data collection. Also, research needs to determine

whether the scores on the Happiness and Life Satisfaction Scale would correlate with other domains of subjective wellbeing.

6.6 Strengths of the Study

The study draws its strength from the fact that the work cuts across different regions of Africa, especially at the item generation stage where all regions were represented at the sessions of focus group discussions. This stage was very important because participants were able to speak out their mind on what obtains in their community as far as happiness and life satisfaction are concerned.

The methods adopted in all the stages of the research were in consonance with what is laid out in the literature. The analyses employed throughout the work were complementary and geared towards retaining the best items for the scale.

The research took place in two countries (Nigeria and South Africa), which are multi cultural and multi ethnic. These facts made the composition of the participants robust and this goes to enhance the reliability and validity as well as the quality of the research.

6.7 Limitations of the Study

The quality of the study would have been enhanced if one country is selected in each of the regions of Africa as a project site; one country would have been selected in the North African region, West African region, East African region and Southern Africa region. Rather the researcher used the nationals of these regions who are residing in either Nigeria or South Africa.

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APPENDIX I

FOCUS GROUP DISCUSSION GUIDE

SECTION A

- What is your own definition of the words life satisfaction?
- How do you know when you are satisfied with life
- What are the tangible indicators of a satisfying life?
- What are the intangible indicators of a satisfying life?
- Do you see group affiliation as a means of achieving life satisfaction

SECTION B

- What is happiness according to you?
- What happens when you are happy/ how do you feel when you are happy?
- What are the physical/material indicators of happiness according to you?
- What are the emotional indicators of happiness?
- What are the material indicators of happiness in your culture?
- What are the non-material indicators of happiness in your culture?
- What are the material indicators of happiness in your religion?
- What are the non-material indicators of happiness in your religion?
- Do you think dignity and respect accorded someone are sources of happiness?
- Do you see taking part in religious activities as a source of happiness?

APPENDIX II

FOCUS GROUP DISCUSSION QUESTIONNAIRE

Please answer the following questions.

Age: Sex:

Ethnic Affiliation:..... Religion Affiliation:.....

Educational Qualification Attained.....; Job Status:.....

Nationality.....

HAPPINESS: Refers to the feeling of pleasure, contentment with ones' situation at a given period of time.

LIFE SATISFACTION: Is the evaluation that an individual makes about events and happenings in his/her life, whether satisfactory or not satisfactory.

SECTION A

Please list 5 (five) items or things that constitute happiness to you:-

- 1.....
- 2.....
- 3.....
- 4.....,
- 5.....

SECTION B

Please list five (5) items or things that constitute life satisfaction to you:-

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

APPENDIX III

Dear Sir/Madam,

Below are the proposed items for Life Satisfaction, a subscale of Happiness and Life Satisfaction Scale (HLSS). Please rate how you think each item measures life satisfaction on a 5 point continuum, from 1 point being the lowest to 5 points being the highest. You can revise or review each item by putting your suggestions in parentheses.

Many thanks Indeed.

S/N	Proposed items	1	2	3	4	5
1	Seeing my children succeed in their endeavours gives me satisfaction.					
2	To have achieved all the good things of life, I feel I have been satisfied with life.					
3	I am content with life because I have a good relationship with my God.					
4	I feel satisfied when I ponder on all that I have passed through in life.					
5	A peep into my assets and wealth gives me satisfaction.					
6	I am satisfied with what I have achieved in business and the profits I have made.					
7	Having sufficient wealth in life ensures life satisfaction for me.					
8	Having good health makes me satisfied with my life.					
9	The quality of time I spend with my family is excellent					
10	I have an excellent relationship with my friends.					
11	I am satisfied with life because I have enjoyed freedom of movement.					
12	Attaining higher position gives me some sorts of satisfaction.					

13	I am satisfied with my position in my work place					
14	I am a prestigious member of my community					
15	Life has been good to me because I can comfortably fend for my family.					
16	Being socially accepted gives me life satisfaction.					
17	My economic stability makes me satisfied with life					
18	I have enjoyed freedom of speech, and an unhindered chance to practise my religion.					
19	Ability to travel to different cities has made my life an interesting one					
20	The opportunity that I have had to take care of street children, orphans has made me a fulfilled person.					
21	I am satisfied because I have already achieved my life goals and dreams.					
22	Self appreciation and actualization helps me to live a satisfied life.					
23	Having access to opportunities and living with other people is what I take to be part of life satisfaction.					
24	Reaching the pinnacle of my education career portrays a satisfying life for me.					
25	Becoming what I so desire in life and achieving it give me a well satisfied life.					
26	Life satisfaction for me entails accepting things the way they are.					
27	The more I get things that I want or need, the more I get satisfied in life.					
28	Respect as well as appreciation from people					

	constitutes life satisfaction to me.					
29	Loving, being loved and people's support of what I want to achieve makes me conclude that I am satisfied with life.					
30	Being educated brings me a high level of satisfaction.					
31	Having a good family constitutes life satisfaction to me.					
32	Not being able to achieve my set goals in life will definitely not bring life satisfaction.					
33	Not being able to cater for immediate family needs bring life dissatisfaction.					
34	Converting souls to the Lord brings me life satisfaction.					
35	Fulfilling my purpose in life as a person makes me attain life satisfaction.					
36	I am satisfied with life because I have encouraged and helped many people to achieve their aim as much as I can.					
37	Growing spiritually gives me satisfaction in life.					
38	Possessing material and other good things of life gives me life satisfaction.					
39	Having a good educational background and having good grades in my educational pursuit gives me life satisfaction.					
40	Taking adequate care of my family brings me joy and makes me satisfied with life.					
41	Making enough money to cater for myself, family and friends is life satisfying.					
42	Being able to perform my religion rituals gives me life satisfaction.					
43	Worshipping and having peace with God					

	constitute life satisfaction.					
44	Having the opportunity to see my children succeeding in their respective endeavours is life satisfying.					
45	Re-uniting with old colleagues or school mates constitute life satisfaction.					
46	Good health conditions of my family represent life satisfaction.					
47	Being able to help my friends to achieve something great in their life has made me to have a fulfilled life.					
48	Seeing my children make tremendous progress in life makes me satisfied with life.					
49	Having good family and a good job that ensure a stable future makes me satisfied with life.					
50	Possessing a lively and a homely environment makes me satisfied with life.					
51	Possessing stable finances which could help builds a good home makes me satisfied with life.					
52	Having good health and a stable relationship gives me life satisfaction.					
53	Ability to perform various religious obligations and other rituals makes me satisfied with life.					
54	Achieving academic breakthrough makes me satisfied with life.					
55	Meeting my moral obligation and family needs are what makes me satisfied with life.					
56	Being loved by the people I care for makes me satisfied with life.					
57	The success of my children proves to me that I would still be living after my death.					
58	Being gainfully employed constitutes life					

	satisfaction to me.					
59	Having good children and being able to take care of them is better than riches.					
60	With achievements made by people around me, I think my efforts have paid off.					
61	The direction of my life in the past few years is giving me a lot of hope about my future.					
62	To a great extent, my religious belief has helped me in balancing my craving for material things.					

Below are the proposed items for another subscale of the HLSS which measures Happiness. As above, you are required to rate these items on a continuum from 1 point to 5 points. Also you can revise or recast the items by putting your suggestion in parentheses.

S/N	Proposed Items	1	2	3	4	5
1	I am always happy when I am around those that are honest and caring.					
2	I am happy when my family and relatives are around me.					
3	It gives me pleasure when I see how my community receives and appreciates me.					
4	I feel elated when I achieve an academic feat.					
5	I am happy with my social network					
6	I always have happy memories					
7	I have a good working relationship with friends and colleagues					
8	I enjoy being with my spouse and family members.					
9	I always like to be free from all forms of stress					
10	Sound health is the source of my happiness					
11	I always feel in control whenever I have					

	sufficient funds to spend					
12	I always like to deliver my responsibilities in the best way.					
13	I am pleased when I receive gifts from loved ones.					
14	Having intelligent children gives me happiness.					
15	Getting the basic necessities of life brings me happiness.					
16	Ability to reach out to other people and assist them brings me happiness					
17	I am pleased because my ideal life is becoming a reality.					
18	I like a situation where I would be free from debt.					
19	Achieving a sound and quality education brings me happiness at all times.					
20	Overcoming everyday challenges, defines my achievement.					
21	Ability to be able to do what my society requires from me defines my happiness.					
22	Possessing a good number of properties within my locality is my source of happiness.					
23	Having a resounding success in all my endeavours gives me happiness.					
24	I often experience joy and elation when I am able to fulfil all my religious obligations.					
25	My goals and dreams measure up to my ideal.					
26	I can take on anything because my physical, economic, and spiritual wellbeing are well catered for.					
27	My ability to get along with my culture by observing all norms and traditions at the right					

	time is my priority.					
28	Belongingness always serves as a source of happiness to me					
29	In this life, I always like to have a cheerful effect on others.					
30	I like to render assistance to the needy at the appropriate time.					
31	I look forward to the day my community will reward me with a prestigious title.					
32	I see myself as a respectable member of my community.					
33	Moving into my personal house is a source of happiness to me.					
34	I wish I do not have friends and relatives.					
35	My family members are sources of my worries					
36	My religious commitments are too demanding					
37	It is high time people stop disturbing others with their personal problems.					
38	Being financially independent and not looking to others for assistance is a source of happiness to me.					
39	Enjoining people to do God's will makes me happy.					
40	Seeing my children successful brings me great happiness.					
41	I am always happy when I receive positive appraisal from people around me.					
42	It is worthwhile to take care of my parents and siblings.					
43	It is a thing of joy for me to meet my goals and targets.					

44	The ultimate source of happiness is to be at peace with oneself and neighbours.					
45	I experience joy whenever I am in the house of God.					
46	I am excited whenever I render help to people at a critical point of their life.					
47	Part of the reasons why I go to my place of worship is that I enjoy the social cohesion that exists among members.					
48	I like to mingle with people in my community.					
49	I derive pleasure in staying indoors.					
50	When I am in the midst of people, I try as much as possible to keep to myself.					
51	I enjoy respect accorded me by my community.					
52	Being able to take active role in my religious activities gives me joy.					
53	Helping to solve other people's problems is a source of happiness to me.					
54	The breaking of good news to me at all times makes me happy.					
55	Hanging out with colleagues at events, place of work or at a place of residence are sources of happiness to me.					
56	Contentment with all things that I have and all that I need makes me happy.					
57	Lending a useful hand to others in times of need is a source of happiness to me.					
58	Truthfulness and sincerity makes me to live at peace with all men thereby making me happy					
59	Life achievements are a source of happiness to me at all times.					

60	My religion brings me happiness especially when I am in full service for God.					
61	Possessing material things like a car and house are sources of happiness to me.					
62	Being at peace with who I am makes me happy					
63	Having and maintaining good health makes me happy at all time.					
64	Keeping and maintaining a healthy relationship with others, especially colleagues, make me happy.					
65	My level of faith with my God makes me happy.					
66	Looking back and seeing how far I have come and achieved makes me happy.					
67	My social status in the society makes me happy.					
68	Staying with my family and having moments together makes me happy.					
70	Possessing wealth at all times brings happiness to me.					

APPENDIX IV

Dear Sir/Madam

HAPPINESS: Refers to the feeling of pleasure, contentment with one's situation at a given period of time.

LIFE SATISFACTION: Is the evaluation that an individual makes about events and happenings in his/her life, whether satisfactory or not satisfactory.

AIM: This exercise will be used to established content validity for the proposed Happiness and Life satisfaction scale.

Below are the proposed items for Happiness, a subscale of Happiness and Life Satisfaction Scale (HLSS). Please rate how suitable or not suitable each item of the proposed scale measures Happiness. You can revise or review each item by putting your suggestions in parentheses.

Many thanks indeed.

Happiness Subscale

S/N	Proposed Items	Suitable	Not Suitable
1	I am always happy when I am around those that are honest and caring.		
2	I am happy when my family and relatives are around me.		
3	It gives me pleasure when I see how my community receives and appreciates me.		
4	I feel elated when I achieve an academic feat.		
5	I always have happy memories		
6	I enjoy being with my spouse and family members.		
7	I always like to be free from all forms of stress		
8	Sound health is the source of my happiness		
9	I always feel in control whenever I have sufficient funds to spend and this makes me happy		
10	Having intelligent children gives me happiness.		
11	Getting the basic necessities of life brings me happiness.		

12	I am pleased because my ideal life is becoming a reality.		
13	I like a situation where I would be free from debt.		
14	Achieving a sound and quality education brings me happiness at all times.		
15	Ability to be able to do what my society requires from me defines my happiness.		
16	Possessing a good number of properties within my locality is my source of happiness.		
17	Having a resounding success in all my endeavours gives me happiness.		
18	I often experience joy and elation when I am able to fulfil all my religious obligations.		
19	I can take on anything because my physical, economic, and spiritual wellbeing are well catered for.		
20	Belongingness always serves as a source of happiness to me		
21	In this life, I always like to have a cheerful effect on others.		
22	I like to render assistance to the needy at the appropriate time.		
23	Moving into my personal house is a source of happiness to me.		
24	Being financially independent and not looking to others for assistance is a source of happiness to me.		
25	Enjoining people to do God's will makes me happy.		
26	I am always happy when I receive positive appraisal from people around me.		
27	It is a thing of joy for me to meet my goals and targets.		
28	The ultimate source of happiness is to be at peace with oneself and neighbours.		
29	I experience joy whenever I am in the house of God.		
30	I am excited whenever I render help to people at a critical point of their life.		

31	Part of the reasons why I go to my place of worship is that I enjoy the social cohesion that exists among members.		
32	I derive pleasure in staying indoors.		
33	The breaking of good news to me at all times makes me happy		
34	Hanging out with colleagues at events, place of work or at a place of residence are sources of happiness to me.		
35	Contentment with all things that I have and all that I need makes me happy.		
36	Lending a useful hand to others in times of need is a source of happiness to me.		
37	Truthfulness and sincerity makes us to live at peace with all men thereby making us all happy		
38	Life achievements are always source of happiness to me.		
39	My religion brings me happiness especially when am in full service for God.		
40	Possessing material things like a car and house are sources of happiness to me.		
41	Being at peace with who I am makes me happy		
42	Having and maintaining good health makes me happy at all time.		
43	Keeping and maintaining a healthy relationship with others, especially colleagues, make me happy.		
44	My level of faith with my God makes me happy.		
45	Looking back and seeing how far I have come and achieved makes me happy.		
46	My social status in the society makes me happy.		
47	Staying with my family and having moments together makes me happy.		
48	Possessing wealth at all times brings happiness to me.		

Below are proposed items for other subscale of HLSS which measures Life Satisfaction. As above you are required to rate these items whether they are suitable for measuring Life Satisfaction or not. Also you can revise or recast the items by putting your suggestion in parentheses.

Life Satisfaction Subscale

S/N	Proposed Items	Suitable	Not Suitable
1	I am satisfied seeing my children my children succeed in their endeavours		
2	I am satisfied having achieved most good things of life		
3	My relationship with God is satisfactory		
4	I am satisfied when I ponder on what I have passed through in life.		
5	My assets give me satisfaction		
6	My wealth gives me satisfaction		
7	I am satisfied with my business		
8	I am satisfied with the condition of my health		
9	My nuclear family is a source of life satisfaction for me.		
10	My relationship with my friends is satisfactory		
11	Being able to move around freely gives me some level of satisfaction		
12	I derive satisfaction from my social status in my community		
13	I am satisfy with my position in my work place		
14	Being a prestigious member of my community gives me satisfaction		
15	Life has been good to me because I can comfortably fend for my family.		
16	Being socially accepted gives me life satisfaction.		
17	The opportunity that I have had to take care of the less privileged		

	gives me fulfilment.		
18	I am satisfied because I have already achieved my life goals		
19	Reaching the pinnacle of my education career gives me life satisfaction		
20	Life satisfaction for me entails accepting things the way they are.		
21	Respect from people constitutes life satisfaction to me.		
22	Being loved by people around me around me gives me satisfaction		
23	Having a good family constitutes life satisfaction to me.		
24	Not being able to cater for immediate family needs bring life dissatisfaction.		
25	Converting souls to the Lord brings me life satisfaction.		
26	I am satisfied with life because I have encouraged and helped many people to achieve their aims as much as I can.		
27	Growing spiritually gives me satisfaction in life.		
28	Having good grades in my educational pursuit gives me life satisfaction		
29	Taking adequate care of my family brings me joy		
30	Making enough money to cater for myself, family and friends is life satisfying.		
31	Being able to perform my religious rituals gives me life satisfaction.		
32	Worshipping my God constitutes life satisfaction to me.		
33	Having the opportunity to see my children succeeding in their respective endeavours is life satisfying.		
34	Re-uniting with old colleagues or school mates constitutes life satisfaction.		
35	Good health conditions of my family represent life satisfaction.		
36	Being able to help my friends to achieve something great in their		

	life has made me to have a fulfilled life.		
37	Seeing my children make tremendous progress in life makes me satisfied with life.		
38	Having a good family gives me satisfaction		
39	Owning a house gives me satisfaction in life		
40	Having sound health gives me life satisfaction		
41	Being married gives life satisfaction		
42	I am satisfied with the performance of my religious obligation		
43	I am satisfied with my level of education		
44	Meeting my moral obligation makes me satisfied with life.		
45	Meeting my family needs gives satisfaction.		
46	Being loved by the people I care for makes me satisfied with life.		
47	The success of my children proves to me that I would still be living after my death.		
48	Being gainfully employed constitutes life satisfaction to me.		
49	Having children is a source of life satisfaction for me		
50	I derive satisfaction in my ability to take care of my children.		
51	Having helped people around me to succeed, my life is close to an ideal		
52	The direction of my life in the past few years is giving me a lot of hope about my future.		
53	My religious belief helps in balancing my craving for material things		

Once again, many thanks for your time and contributions.

APPENDIX V

Department of Psychology,
NorthWest University,
Mafikeng Campus,
South Africa.

Dear Respondent,

This questionnaire is purely for PhD research, therefore there is no right or wrong answer and the information provided will be used to analyse socio-psychological concepts. So you are kindly required to complete this questionnaire with all honesty and sincerity. Any information given will be treated with utmost confidentiality.

SECTION A

Please tick one of the boxes provided as it applies to you or fill in the gap where necessary

Sex : Male () Female ()

Age

Marital Status: Single () Married () Cohabiting () Divorced () Separated ()

Ethnic Affiliation Religious Affiliation.....

Nationality Educational Qualification Attained

SECTION B

Below are a number of statements on how you feel as an individual, please indicate the degree of agreement or disagreement with each of the statements by ticking the appropriate box to the right of the statement by using the following response format: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD).

S/N	Items	SA	A	U	D	SD
1	I am always happy when I am around those that are honest and caring.	SA	A	U	D	SD
2	I am happy when my family and relatives are around me.	SA	A	U	D	SD
3	It gives me pleasure when I see how my community receives and appreciates me.	SA	A	U	D	SD
4	I feel elated when I achieve an academic feat.	SA	A	U	D	SD
5	I always have happy memories	SA	A	U	D	SD
6	I enjoy being with my spouse and family members.	SA	A	U	D	SD
7	I always like to be free from all forms of stress	SA	A	U	D	SD
8	Sound health is the source of my happiness	SA	A	U	D	SD
9	I always feel in control whenever I have sufficient funds to spend and this makes me happy	SA	A	U	D	SD
10	Having intelligent children gives me happiness.	SA	A	U	D	SD
11	Getting the basic necessities of life brings me happiness.	SA	A	U	D	SD
12	I am pleased because my ideal life is becoming a reality.	SA	A	U	D	SD
13	I like a situation where I would be free from	SA	A	U	D	SD

	debt.					
14	Achieving a sound and quality education brings me happiness at all times.	SA	A	U	D	SD
15	Having a resounding success in all my endeavours gives me happiness.	SA	A	U	D	SD
16	I often experience joy and elation when I am able to fulfil all my religious obligations.	SA	A	U	D	SD
17	Belongingness always serves as a source of happiness to me	SA	A	U	D	SD
18	In this life, I always like to have a cheerful effect on others.	SA	A	U	D	SD
19	I like to render assistance to the needy at the appropriate time.	SA	A	U	D	SD
20	Moving into my personal house is a source of happiness to me.	SA	A	U	D	SD
21	Being financially independent is a source of happiness to me.	SA	A	U	D	SD
22	Enjoining people to do God's will makes me happy.	SA	A	U	D	SD
23	I am always happy when I receive positive appraisal from people around me.	SA	A	U	D	SD
24	It is a thing of joy for me to meet my goals and targets.	SA	A	U	D	SD
25	The ultimate source of happiness is to be at peace with oneself and neighbours.	SA	A	U	D	SD
26	I experience joy whenever I am in the house of God.	SA	A	U	D	SD
27	I am excited whenever I render help to people at a critical point of their lives.	SA	A	U	D	SD
28	I derive pleasure in staying indoors.	SA	A	U	D	SD
29	The breaking of good news to me at all times makes me happy	SA	A	U	D	SD
30	Hanging out with colleagues at events, place of work or at a place of residence are sources of happiness to me.	SA	A	U	D	SD
31	Contentment with all things that I have and all that I need makes me happy.	SA	A	U	D	SD
32	Truthfulness and sincerity makes me to live at peace with all men thereby making me happy	SA	A	U	D	SD
33	Life achievements are always a source of happiness to me at all times.	SA	A	U	D	SD
34	My religion brings me happiness especially when I am in the full service for God.	SA	A	U	D	SD
35	Possessing material things like a car and house are sources of happiness to me.	SA	A	U	D	SD
36	Being at peace with who I am makes me happy	SA	A	U	D	SD
37	Keeping and maintaining a healthy relationship with others, especially colleagues, make me	SA	A	U	D	SD

	happy.					
38	My level of faith with my God makes me happy.	SA	A	U	D	SD
39	Looking back and seeing how far I have come and achieved makes me happy.	SA	A	U	D	SD
40	My social status in the society makes me happy.	SA	A	U	D	SD
41	Staying with my family and having moments together makes me happy.	SA	A	U	D	SD
42	Possessing wealth at all times brings happiness to me.	SA	A	U	D	SD

SECTION C

Below is a list of statements to which your response is sought. Each of the statements is accompanied by a response format ranging from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) to Strongly Disagree (SD). Please tick the response which most accurately and honestly describes how you feel about your present situation.

S/ N	Items	SA	A	U	D	SD
1	I am satisfied seeing my children succeed in their endeavours	SA	A	U	D	SD
2	I am satisfied having achieved most good things of life	SA	A	U	D	SD
3	My relationship with God is satisfactory	SA	A	U	D	SD
4	I am satisfied when I ponder on what I have passed through in life.	SA	A	U	D	SD
5	I am satisfied with my business	SA	A	U	D	SD
6	I am satisfied with the condition of my health	SA	A	U	D	SD
7	My nuclear family is a source of life satisfaction for me.	SA	A	U	D	SD
8	My relationship with my friends is satisfactory	SA	A	U	D	SD
9	Being able to move around freely gives me some level of satisfaction	SA	A	U	D	SD
10	I derive satisfaction from my social status in my community	SA	A	U	D	SD
11	Life has been good to me because I can comfortably fend for my family.	SA	A	U	D	SD
12	Being socially accepted gives me life satisfaction.	SA	A	U	D	SD
13	The opportunity that I have had to take care of the less privileged gives me fulfilment.	SA	A	U	D	SD
14	Reaching the pinnacle of my education career gives me life satisfaction	SA	A	U	D	SD
15	Life satisfaction for me entails accepting things the way they are.	SA	A	U	D	SD
16	Respect from people constitutes life satisfaction to me.	SA	A	U	D	SD
17	Being loved by people around me gives me satisfaction.	SA	A	U	D	SD
18	Having a good family constitutes life satisfaction to me.	SA	A	U	D	SD
19	Not being able to cater for immediate family needs bring life dissatisfaction.	SA	A	U	D	SD

20	Converting souls to the Lord brings me life satisfaction.	SA	A	U	D	SD
21	I am satisfied with life because I have encouraged and helped many people to achieve their aims as much as I can.	SA	A	U	D	SD
22	Growing spiritually gives me satisfaction in life.	SA	A	U	D	SD
23	Having good grades in my educational pursuit gives me life satisfaction.	SA	A	U	D	SD
24	Taking adequate care of my family brings me joy	SA	A	U	D	SD
25	Making enough money to cater for myself, family and friends is life satisfying.	SA	A	U	D	SD
26	Being able to perform my religious rituals gives me life satisfaction.	SA	A	U	D	SD
27	Worshipping my God constitutes life satisfaction to me.	SA	A	U	D	SD
28	Having the opportunity to see my children succeed in their respective endeavours is life satisfying.	SA	A	U	D	SD
29	Good health conditions of my family represent life satisfaction.	SA	A	U	D	SD
30	Being able to help my friends to achieve something great in their lives has made me to have a fulfilled life.	SA	A	U	D	SD
31	Seeing my children make tremendous progress in life makes me satisfied with life.	SA	A	U	D	SD
32	Having a good family gives me satisfaction.	SA	A	U	D	SD
33	Owning a house gives me satisfaction in life.	SA	A	U	D	SD
34	Having sound health gives me life satisfaction.	SA	A	U	D	SD
35	Being married gives me life satisfaction.	SA	A	U	D	SD
36	I am satisfied with the performance of my religious obligation.	SA	A	U	D	SD
37	I am satisfied with my level of education.	SA	A	U	D	SD
38	Meeting my moral obligation makes me satisfied with life.	SA	A	U	D	SD
39	Meeting my family needs give satisfaction.	SA	A	U	D	SD
40	Being loved by the people I care for makes me satisfied with life.	SA	A	U	D	SD
41	The success of my children proves to me that I would still be living after my death.	SA	A	U	D	SD
42	Being gainfully employed constitutes life satisfaction to me.	SA	A	U	D	SD
43	Having children is a source of life satisfaction for me	SA	A	U	D	SD
44	I derive satisfaction in my ability to take care of my children.	SA	A	U	D	SD
45	Having helped people around me to succeed, my life is close to an ideal.	SA	A	U	D	SD
46	The direction of my life in the past few years is giving me a lot of hope about my future.	SA	A	U	D	SD
47	My religious belief helps in balancing my craving for material things.	SA	A	U	D	SD

APPENDIX VI

Department of Psychology,
NorthWest University,
Mafikeng Campus,
South Africa.

Dear Respondent,

This questionnaire is purely for PhD research, therefore there is no right or wrong answer and the information provided will be used to analyse socio-psychological concepts. So you are kindly required to complete this questionnaire with all honesty and sincerity. Any information given will be treated with utmost confidentiality.

SECTION A

Please tick one of the boxes provided as it applies to you or fill in the gap where necessary

Sex: Male () Female ()

Age

Marital Status: Single () Married () Cohabiting () Divorced () Separated ()

Ethnic Affiliation Religious Affiliation.....

Nationality Educational Qualification Attained

Profession.....

SECTION B

Below are a number of statements on how you feel as an individual, please indicate the degree of agreement or disagreement with each of the statements by ticking the appropriate box to the right of the statement by using the following response format: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD).

S/N	Items	SA	A	U	D	SD
1	I always have happy memories	SA	A	U	D	SD
2	Sound health is the source of my happiness	SA	A	U	D	SD
3	I always feel in control whenever I have sufficient funds to spend and this makes me happy	SA	A	U	D	SD
4	Having intelligent children gives me happiness.	SA	A	U	D	SD
5	Getting the basic necessities of life brings me happiness.	SA	A	U	D	SD
6	Achieving a sound and quality education brings me happiness at all times.	SA	A	U	D	SD
7	Having a resounding success in all my endeavours gives me happiness.	SA	A	U	D	SD
8	I often experience joy and elation when I am able to fulfil all my religious obligations.	SA	A	U	D	SD
9	Belongingness always serves as a source of happiness to me	SA	A	U	D	SD
10	In this life, I always like to have a cheerful effect on others.	SA	A	U	D	SD
11	I like to render assistance to the needy at the appropriate time.	SA	A	U	D	SD

12	Enjoining people to do God's will makes me happy.	SA	A	U	D	SD
13	I am always happy when I receive positive appraisal from people around me.	SA	A	U	D	SD
14	It is a thing of joy for me to meet my goals and targets.	SA	A	U	D	SD
15	The ultimate source of happiness is to be at peace with oneself and neighbours.	SA	A	U	D	SD
16	I am excited whenever I render help to people at the critical point of their lives.	SA	A	U	D	SD
17	The breaking of good news to me at all times makes me happy	SA	A	U	D	SD
18	Hanging out with colleagues at events, place of work or at a place of residence are sources of happiness to me.	SA	A	U	D	SD
19	Contentment with all things that I have and all that I need makes me happy.	SA	A	U	D	SD
20	Truthfulness and sincerity makes me to live at peace with all men thereby making me happy	SA	A	U	D	SD
21	Life achievements are always a source of happiness to me.	SA	A	U	D	SD
22	My religion brings me happiness especially when I am in the full service for God.	SA	A	U	D	SD
23	Possessing material things like a car and house are sources of happiness to me.	SA	A	U	D	SD
24	Being at peace with who I am makes me happy	SA	A	U	D	SD
25	Keeping and maintaining a healthy relationship with others, especially colleagues make me happy.	SA	A	U	D	SD
26	My level of faith with my God makes me happy.	SA	A	U	D	SD
27	Looking back and seeing how far I have come and achieved makes me happy.	SA	A	U	D	SD
28	My social status in the society makes me happy.	SA	A	U	D	SD
29	Staying with my family and having moments together makes me happy.	SA	A	U	D	SD
30	Possessing wealth at all times brings happiness to me.	SA	A	U	D	SD

SECTION C

Below is a list of statements to which your response is sought. Each of the statements is accompanied by a response format which ranges from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) to Strongly Disagree (SD). Please tick the response which most accurately and honestly describes how you feel about your present situation.

S/N	Items	SA	A	U	D	SD
1	I am satisfied having achieved most good things of life	SA	A	U	D	SD
2	My nuclear family is a source of life satisfaction for me.	SA	A	U	D	SD

3	My relationship with my friends is satisfactory	SA	A	U	D	SD
4	I derive satisfaction from my social status in my community	SA	A	U	D	SD
5	Being socially accepted gives me life satisfaction.	SA	A	U	D	SD
6	The opportunity that I have had to take care of the less privilege gives me fulfilment.	SA	A	U	D	SD
7	Reaching the pinnacle of my education career gives me life satisfaction	SA	A	U	D	SD
8	Respect from people constitutes life satisfaction to me.	SA	A	U	D	SD
9	Being loved by people around me gives me satisfaction.	SA	A	U	D	SD
10	Having a good family constitutes life satisfaction to me.	SA	A	U	D	SD
11	Converting souls to the Lord brings me life satisfaction.	SA	A	U	D	SD
12	Growing spiritually gives me satisfaction in life.	SA	A	U	D	SD
13	Having good grades in my educational pursuit gives me life satisfaction.	SA	A	U	D	SD
14	Taking adequate care of my family brings me joy	SA	A	U	D	SD
15	Making enough money to cater for myself, family and friends is life satisfying.	SA	A	U	D	SD
16	Being able to perform my religious rituals gives me life satisfaction.	SA	A	U	D	SD
17	Worshipping my God constitutes life satisfaction to me.	SA	A	U	D	SD
18	Having the opportunity to see my children succeed in their respective endeavours is life satisfying.	SA	A	U	D	SD
19	Good health conditions of my family represent life satisfaction.	SA	A	U	D	SD
20	Being able to help my friends to achieve something great in their lives has made me to have a fulfilled life.	SA	A	U	D	SD
21	Having a good family gives me satisfaction.	SA	A	U	D	SD
22	Owning a house gives me satisfaction in life.	SA	A	U	D	SD
23	I am satisfied with the performance of my religious obligation.	SA	A	U	D	SD
24	I am satisfied with my level of education.	SA	A	U	D	SD
25	Meeting my 'moral obligation makes me satisfied with life.	SA	A	U	D	SD
26	Meeting my family needs give satisfaction.	SA	A	U	D	SD
27	Being loved by the people I care for makes me satisfied with life.	SA	A	U	D	SD
28	The success of my children proves to me that I would still be living after my death.	SA	A	U	D	SD
29	Being gainfully employed constitutes life satisfaction to me.	SA	A	U	D	SD
30	Having children is a source of life satisfaction for me	SA	A	U	D	SD

31	I derive satisfaction in my ability to take care of my children.	SA	A	U	D	SD
32	Having helped people around me to succeed, my life is close to ideal.	SA	A	U	D	SD
33	The direction of my life in the past few years is giving me a lot of hope about my future.	SA	A	U	D	SD
34	My religious belief helps in balancing my craving for material things.	SA	A	U	D	SD

SECTION D

Read each statement and then tick the appropriate option to the right of the statement to indicate how you feel right now using this response format “A Little of the Time” (1); “Some of the Time” (2); “Good part of the Time” (3); “Most of the Time” (4) . Again, there are no right or wrong answers.

S/N	Items	1	2	3	4
1	I feel down-hearted and blue	1	2	3	4
2	Morning is when I feel the best	1	2	3	4
3	I have crying spells or feel like it	1	2	3	4
4	I have trouble sleeping at night	1	2	3	4
5	I eat as much as I used to	1	2	3	4
6	I still enjoy sex	1	2	3	4
7	I notice that I am losing weight	1	2	3	4
8	I have trouble with constipation	1	2	3	4
9	My heart beats faster than usual	1	2	3	4
10	I get tired for no reason	1	2	3	4
11	My mind is as clear as it used to be	1	2	3	4
12	I find it easy to do the things I used to	1	2	3	4
13	I am restless and can't keep still	1	2	3	4
14	I feel hopeful about the future	1	2	3	4
15	I am more irritable than usual	1	2	3	4
16	I find it easy to make decision	1	2	3	4
17	I feel that I am useful and needed	1	2	3	4

18	My life is pretty full	1	2	3	4
19	I feel that others would be better off if I were dead	1	2	3	4
20	I still enjoy the things I used to do	1	2	3	4

SECTION E

Below are the statements people use to describe themselves. For each item, indicate the extent, to which the statement applies to you, using the following Strongly Agree (SA)=4, Agree (A)=3, Disagree (D)=2, Strongly Disagree (SD)=1.

S/N	Items	1	2	3	4
1	I have good relationships with most people	1	2	3	4
2	I often prefer to stay away from people	1	2	3	4
3	I feel that I have experienced adequate sense of belonging in my community	1	2	3	4
4	I feel loved by my family	1	2	3	4
5	Generally, I can solve my problems	1	2	3	4
6	I have adequate finances	1	2	3	4
7	If I cannot solve my problems alone, I know where to obtain help.	1	2	3	4
8	I have adequate knowledge of community resources available to me	1	2	3	4
9	I feel a sense of commitment to my community	1	2	3	4
10	I contribute to the wellbeing of my community	1	2	3	4
11	I often have difficulty getting along with most people	1	2	3	4
12	I feel the rules and regulations in my community are adequate	1	2	3	4
13	I have adequate education	1	2	3	4
14	I like my job	1	2	3	4
15	My living condition is satisfactory	1	2	3	4

Once again, many thanks for your time.

APPENDIX VII

Frequencies

Statistics

	Sex	Marital Status	Ethnic Affiliation	Religious Affiliation	Nationality
N	Valid	1468	1468	1468	1468
	Missing	0	0	0	0

Statistics

	Educational Qualification	Profession
N	Valid	1468
	Missing	0

Frequency Table

Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	784	53.4	53.4
	Female	684	46.6	100.0
	Total	1468	100.0	

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	694	47.3	47.3
	Married	701	47.8	95.0
	Cohabiting	19	1.3	96.3
	Divorced	46	3.1	99.5

Separated	8	.5	.5	100.0
Total	1468	100.0	100.0	

Ethnic Affiliation

	Frequency	Percent	Valid Percent	Cumulative Percent
Kanuri	69	4.7	4.7	4.7
Hausa	65	4.4	4.4	9.1
Bura	139	9.5	9.5	18.6
Michika	21	1.4	1.4	20.0
Fulani	29	2.0	2.0	22.0
Gwaza	15	1.0	1.0	23.0
Shuwa	14	1.0	1.0	24.0
Marghi	18	1.2	1.2	25.2
Yoruba	183	12.5	12.5	37.7
Valid Igbo	112	7.6	7.6	45.3
Urhobo	13	.9	.9	46.2
Ijaw	13	.9	.9	47.1
Benin	62	4.2	4.2	51.3
Alago	1	.1	.1	51.4
Nkamue	1	.1	.1	51.4
Zulu	36	2.5	2.5	53.9
Setswana	73	5.0	5.0	58.9
Xhosa	35	2.4	2.4	61.2
Sotho	5	.3	.3	61.6

Ashanti	48	3.3	3.3	64.9
Tsonga	11	.7	.7	65.6
Caucasian	1	.1	.1	65.7
Kabre	34	2.3	2.3	68.0
Akan	31	2.1	2.1	70.1
Bariba	20	1.4	1.4	71.5
Idoma	14	1.0	1.0	72.4
Igala	26	1.8	1.8	74.2
Etulo	1	.1	.1	74.3
Tiv	3	.2	.2	74.5
Calaba	1	.1	.1	74.5
Nupe	10	.7	.7	75.2
Ibibio	3	.2	.2	75.4
Esan	35	2.4	2.4	77.8
Ibira	16	1.1	1.1	78.9
Kanuri	3	.2	.2	79.1

Ethnic Affiliation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Calabar	4	.3	.3	79.4
Coloured	45	3.1	3.1	82.4
Benue	1	.1	.1	82.5
Bassange	1	.1	.1	82.6
Tsekiri	2	.1	.1	82.7

Mole-Dagbane	4	.3	.3	83.0
Losso	44	3.0	3.0	86.0
Gown	5	.3	.3	86.3
Adja	5	.3	.3	86.6
Ewe	58	4.0	4.0	90.6
Suyani	28	1.9	1.9	92.5
Guan	3	.2	.2	92.7
Dahomeyan	1	.1	.1	92.8
Etsako	10	.7	.7	93.5
Udu	1	.1	.1	93.5
Efide	1	.1	.1	93.6
Asian	3	.2	.2	93.8
Igede	1	.1	.1	93.9
Voda ewe	45	3.1	3.1	96.9
Ayigbe ewe	7	.5	.5	97.4
Eshew	1	.1	.1	97.5
Koriforidua	5	.3	.3	97.8
Efik	1	.1	.1	97.9
Eule	1	.1	.1	98.0
Ngizim	1	.1	.1	98.0
Uromi	5	.3	.3	98.4
Afanya	3	.2	.2	98.6
Caucasian	10	.7	.7	99.3
Kumasi	11	.7	.7	100.0

Total	1468	100.0	100.0
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Religious Affiliation

	Frequency	Percent	Valid Percent	Cumulative Percent
Christianity	972	66.2	66.2	66.2
Islam	379	25.8	25.8	92.0
Traditionalist	114	7.8	7.8	99.8
Judaism	2	.1	.1	99.9
Vodu	1	.1	.1	100.0
Total	1468	100.0	100.0	

Nationality

	Frequency	Percent	Valid Percent	Cumulative Percent
Nigerian	860	58.6	58.6	58.6
South African	236	16.1	16.1	74.7
Ghanaian	173	11.8	11.8	86.4
Togolese	160	10.9	10.9	97.3
Benin	39	2.7	2.7	100.0
Total	1468	100.0	100.0	

Educational Qualification

	Frequency	Percent	Valid Percent	Cumulative Percent
No Formal Education	19	1.3	1.3	1.3
Primary/Quranic	80	5.4	5.4	6.7
Secondary	381	26.0	26.0	32.7

Diploma/ NCE/ ND/ Grade II	374	25.5	25.5	58.2
Undergraduate	223	15.2	15.2	73.4
First Degree/ HND	322	21.9	21.9	95.3
Masters	61	4.2	4.2	99.5
PhD	8	.5	.5	100.0
Total	1468	100.0	100.0	

Profession

	Frequency	Percent	Valid Percent	Cumulative Percent
Trading	134	9.1	9.1	9.1
Farmer	48	3.3	3.3	12.4
Tailor	161	11.0	11.0	23.4
Teacher	150	10.2	10.2	33.6
Religious Leader	24	1.6	1.6	35.2
Artisan	113	7.7	7.7	42.9
Lecturer	53	3.6	3.6	46.5
Valid Student	366	24.9	24.9	71.5
Artist/ Artress	16	1.1	1.1	72.5
Architecture	2	.1	.1	72.7
Banker	37	2.5	2.5	75.2
Police	44	3.0	3.0	78.2
Nursing	37	2.5	2.5	80.7
Air force	1	.1	.1	80.8
Security	11	.7	.7	81.5

Unemployed	78	5.3	5.3	86.9
Lawyer	12	.8	.8	87.7
Messenger/ Steward/ Cleaner	19	1.3	1.3	89.0
Engineer	21	1.4	1.4	90.4
Journalist	11	.7	.7	91.1
Army	3	.2	.2	91.3
Pharmacist	3	.2	.2	91.6
Civil/ Public Servant	48	3.3	3.3	94.8
Doctor	21	1.4	1.4	96.3
Statistician/ Analyst	3	.2	.2	96.5
Scientist	6	.4	.4	96.9
Factory Worker	3	.2	.2	97.1
Agent (Estate)	4	.3	.3	97.3
Politics	3	.2	.2	97.5
Pastors	10	.7	.7	98.2
Secretary	21	1.4	1.4	99.7
Sports Personnel	5	.3	.3	100.0
Total	1468	100.0	100.0	

Reliability

Scale: HAPPINESS SCALE

Case Processing Summary

		N	%
Cases	Valid	1468	100.0
	Excluded ^a	0	.0
	Total	1468	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.914	.915	30

Item Statistics

	Mean	Std. Deviation	N
B1	4.29	.916	1468
B2	4.01	.848	1468
B3	4.17	.927	1468
B4	4.30	.826	1468
B5	4.31	.800	1468
B6	4.33	.815	1468
B7	4.34	.778	1468
B8	4.35	.780	1468

B9	4.15	.969	1468
B10	4.33	.781	1468
B11	4.32	.770	1468
B12	4.38	.772	1468
B13	4.28	.881	1468
B14	4.43	.778	1468
B15	4.35	.808	1468
B16	4.40	.778	1468
B17	4.39	.873	1468
B18	4.05	1.004	1468
B19	4.29	.859	1468
B20	4.25	.869	1468
B21	4.24	.916	1468
B22	4.33	.829	1468
B23	3.77	1.069	1468
B24	4.25	.833	1468
B25	4.21	.845	1468
B26	4.34	.856	1468
B27	4.17	.901	1468
B28	4.07	.981	1468
B29	4.30	.888	1468
B30	4.02	1.130	1468

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.247	3.772	4.427	.655	1.174	.020	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B1	123.11	185.771	.375	.241	.913
B2	123.39	191.046	.179	.251	.915
B3	123.24	183.247	.472	.385	.911
B4	123.11	184.177	.496	.379	.911
B5	123.10	182.859	.576	.469	.910
B6	123.08	183.892	.516	.402	.910
B7	123.07	184.005	.538	.429	.910
B8	123.06	185.502	.464	.378	.911
B9	123.26	182.779	.468	.410	.911
B10	123.08	185.929	.442	.357	.912
B11	123.09	184.820	.504	.378	.911
B12	123.03	184.668	.510	.427	.911
B13	123.13	183.169	.504	.426	.911
B14	122.98	185.777	.452	.431	.911
B15	123.06	184.609	.488	.362	.911
B16	123.01	184.852	.497	.419	.911
B17	123.02	185.420	.411	.392	.912
B18	123.36	182.470	.460	.446	.911
B19	123.12	181.858	.577	.472	.909
B20	123.16	182.079	.560	.444	.910
B21	123.17	180.144	.609	.509	.909
B22	123.08	183.888	.506	.467	.911
B23	123.64	185.100	.334	.355	.914

B24	123.16	184.377	.481	.429	.911
B25	123.20	183.440	.516	.452	.910
B26	123.07	183.072	.525	.464	.910
B27	123.24	181.801	.549	.481	.910
B28	123.33	179.950	.572	.518	.909
B29	123.11	181.667	.564	.460	.910
B30	123.39	177.562	.569	.516	.910

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
127.41	195.965	13.999	30

Appendix IX

Reliability

Scale: HAPPINESS SCALE

Case Processing Summary

		N	%
Cases	Valid	1468	100.0
	Excluded ^a	0	.0
	Total	1468	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.916	.917	27

Item Statistics

	Mean	Std. Deviation	N
B3	4.17	.927	1468
B4	4.30	.826	1468
B5	4.31	.800	1468
B6	4.33	.815	1468
B7	4.34	.778	1468
B8	4.35	.780	1468
B9	4.15	.969	1468
B10	4.33	.781	1468
B11	4.32	.770	1468

B12	4.38	.772	1468
B13	4.28	.881	1468
B14	4.43	.778	1468
B15	4.35	.808	1468
B16	4.40	.778	1468
B17	4.39	.873	1468
B18	4.05	1.004	1468
B19	4.29	.859	1468
B20	4.25	.869	1468
B21	4.24	.916	1468
B22	4.33	.829	1468
B24	4.25	.833	1468
B25	4.21	.845	1468
B26	4.34	.856	1468
B27	4.17	.901	1468
B28	4.07	.981	1468
B29	4.30	.888	1468
B30	4.02	1.130	1468

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.271	4.017	4.427	.410	1.102	.011	27

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B3	111.16	160.062	.445	.348	.914

B4	111.03	160.479	.488	.365	.913
B5	111.02	159.016	.581	.469	.912
B6	111.00	160.047	.517	.400	.913
B7	110.99	159.965	.549	.422	.913
B8	110.98	161.445	.470	.376	.914
B9	111.18	159.426	.450	.404	.914
B10	111.00	161.876	.447	.355	.914
B11	111.00	160.877	.507	.375	.913
B12	110.95	160.571	.522	.425	.913
B13	111.05	159.041	.520	.422	.913
B14	110.90	161.494	.469	.426	.914
B15	110.98	160.546	.497	.361	.913
B16	110.93	160.575	.517	.414	.913
B17	110.94	161.355	.417	.383	.915
B18	111.28	158.827	.456	.444	.914
B19	111.04	157.975	.586	.467	.912
B20	111.07	158.052	.575	.443	.912
B21	111.09	156.551	.610	.498	.911
B22	111.00	159.642	.527	.463	.913
B24	111.08	160.374	.488	.427	.913
B25	111.11	159.673	.514	.442	.913
B26	110.99	159.313	.524	.460	.913
B27	111.16	157.946	.556	.480	.912
B28	111.25	156.765	.555	.512	.912
B29	111.03	157.630	.581	.452	.912

B30	111.31	154.885	.541	.474	.913
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Scale Statistics

Mean	Variance	Std. Deviation	N of Items
115.33	171.368	13.091	27

Appendix X

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.927
Approx. Chi-Square		15494.011
Bartlett's Test of Sphericity	df	351
	Sig.	.000

Communalities

	Initial	Extraction
B3	1.000	.509
B4	1.000	.508
B5	1.000	.577
B6	1.000	.500
B7	1.000	.486
B8	1.000	.459
B9	1.000	.649
B10	1.000	.501
B11	1.000	.441
B12	1.000	.517
B13	1.000	.428
B14	1.000	.556
B15	1.000	.429
B16	1.000	.553
B17	1.000	.682
B18	1.000	.665

B19	1.000	.602
B20	1.000	.565
B21	1.000	.613
B22	1.000	.599
B24	1.000	.538
B25	1.000	.596
B26	1.000	.638
B27	1.000	.611
B28	1.000	.677
B29	1.000	.561
B30	1.000	.632

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	8.614	31.906	31.906	8.614	31.906
2	2.444	9.051	40.957	2.444	9.051
3	1.583	5.863	46.820	1.583	5.863
4	1.245	4.611	51.431	1.245	4.611
5	1.206	4.468	55.899	1.206	4.468
6	.979	3.626	59.525		
7	.881	3.262	62.786		
8	.774	2.868	65.655		
9	.713	2.640	68.295		

10	.680	2.519	70.814	
11	.643	2.382	73.196	
12	.597	2.213	75.408	
13	.559	2.072	77.480	
14	.541	2.005	79.485	
15	.535	1.982	81.467	
16	.529	1.960	83.427	
17	.505	1.869	85.297	
18	.483	1.789	87.086	
19	.452	1.676	88.761	
20	.434	1.607	90.368	
21	.418	1.547	91.915	
22	.417	1.545	93.460	
23	.389	1.440	94.900	
24	.374	1.385	96.285	
25	.357	1.321	97.606	
26	.326	1.209	98.815	
27	.320	1.185	100.000	

Component Matrix^a

	Component				
	1	2	3	4	5
B3	.484	.187	.449	-.182	-.072
B4	.543	.276	.041	-.081	-.359
B5	.632	.260	.096	.063	-.309
B6	.569	.286	.098	-.164	-.242

B7	.597	.311	.179	.002	.030
B8	.521	.317	.022	-.021	.293
B9	.487	.193	.495	-.142	.330
B10	.494	.361	.064	-.016	.349
B11	.558	.322	.014	.107	.117
B12	.580	.340	-.255	.003	.001
B13	.573	.302	-.060	.068	-.015
B14	.530	.376	-.352	-.025	-.101
B15	.551	.280	-.152	.107	.113
B16	.574	.272	-.311	.168	.157
B17	.454	-.303	.236	.558	.130
B18	.489	-.307	.450	.344	.104
B19	.626	-.277	.167	.297	-.133
B20	.623	-.273	-.054	.272	-.160
B21	.655	-.244	-.015	.095	-.340
B22	.584	-.238	-.362	.183	-.194
B24	.538	-.330	-.312	-.001	.207
B25	.555	-.365	-.088	-.101	.370
B26	.570	-.363	-.258	-.206	.269
B27	.601	-.373	-.123	-.290	.110
B28	.592	-.327	.170	-.430	-.071
B29	.632	-.231	-.213	-.205	-.144
B30	.579	-.294	.293	-.316	-.158

Extraction Method: Principal Component Analysis.^a

a. 5 components extracted.

Appendix XI

Reliability

Scale: LIFE SATISFACTION SCALE

Case Processing Summary

		N	%
Cases	Valid	1468	100.0
	Excluded ^a	0	.0
	Total	1468	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.940	.941	32

Item Statistics

	Mean	Std. Deviation	N
C1	4.28	.960	1468
C2	4.18	.920	1468
C3	4.11	.948	1468
C4	3.98	1.045	1468
C5	4.07	1.027	1468
C6	4.16	.918	1468
C8	4.07	.913	1468
C9	4.18	.875	1468
C10	4.33	.817	1468

C11	4.30	.851	1468
C12	4.28	.883	1468
C13	4.22	.973	1468
C14	4.37	.894	1468
C15	4.32	.921	1468
C16	4.33	.892	1468
C17	4.40	.776	1468
C18	4.32	.847	1468
C19	4.38	.821	1468
C20	4.29	.835	1468
C21	4.38	.774	1468
C22	4.12	.908	1468
C23	4.19	.908	1468
C24	4.02	1.123	1468
C25	4.12	.871	1468
C26	4.20	.898	1468
C27	4.21	.920	1468
C29	4.14	.897	1468
C30	4.24	.888	1468
C31	4.27	.858	1468
C32	4.27	.857	1468
C33	4.24	.847	1468
C34	4.19	.982	1468

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.224	3.977	4.397	.420	1.106	.012	32

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	130.88	276.817	.470	.444	.939
C2	130.99	274.661	.566	.497	.938
C3	131.05	272.967	.603	.548	.938
C4	131.19	272.597	.552	.525	.938
C5	131.09	271.922	.584	.500	.938
C6	131.00	274.468	.574	.449	.938
C8	131.09	275.161	.553	.449	.938
C9	130.99	277.085	.511	.425	.939
C10	130.84	277.901	.521	.455	.938
C11	130.86	276.555	.547	.508	.938
C12	130.88	276.541	.526	.491	.938
C13	130.94	272.532	.600	.468	.938
C14	130.80	277.391	.489	.355	.939
C15	130.84	275.969	.521	.430	.938
C16	130.83	274.145	.603	.487	.938
C17	130.77	277.383	.571	.524	.938
C18	130.84	275.755	.579	.522	.938

C19	130.78	275.804	.597	.525	.938
C20	130.87	275.492	.598	.491	.938
C21	130.78	277.761	.558	.469	.938
C22	131.04	274.990	.563	.434	.938
C23	130.97	274.628	.575	.482	.938
C24	131.15	274.080	.468	.441	.939
C25	131.04	275.123	.584	.543	.938
C26	130.97	273.871	.608	.552	.938
C27	130.95	274.080	.585	.481	.938
C29	131.02	274.835	.575	.438	.938
C30	130.93	276.143	.536	.473	.938
C31	130.89	275.982	.562	.534	.938
C32	130.89	275.353	.586	.496	.938
C33	130.92	276.772	.542	.412	.938
C34	130.97	274.112	.544	.403	.938

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
135.16	292.757	17.110	32

Appendix XII

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.944
Approx. Chi-Square		21921.443
Bartlett's Test of Sphericity	df	496
Sig.		.000

Communalities

	Initial	Extraction
C1	1.000	.563
C2	1.000	.574
C3	1.000	.659
C4	1.000	.681
C5	1.000	.600
C6	1.000	.538
C8	1.000	.560
C9	1.000	.586
C10	1.000	.642
C11	1.000	.639
C12	1.000	.618
C13	1.000	.580
C14	1.000	.469
C15	1.000	.620
C16	1.000	.580
C17	1.000	.649

C18	1.000	.591
C19	1.000	.577
C20	1.000	.527
C21	1.000	.530
C22	1.000	.519
C23	1.000	.600
C24	1.000	.631
C25	1.000	.676
C26	1.000	.633
C27	1.000	.576
C29	1.000	.522
C30	1.000	.603
C31	1.000	.671
C32	1.000	.609
C33	1.000	.531
C34	1.000	.561

Extraction Method: Principal
Component Analysis.

Component Matrixa

	Component					
	1	2	3	4	5	6
C1	.494	.478	.179	-.139	.097	.171
C2	.590	.433	.119	-.098	.073	.098
C3	.625	.452	.165	-.129	.139	-.042
C4	.577	.420	.216	-.161	.286	-.132
C5	.612	.335	.113	-.053	.145	-.277

C6	.605	.316	-.097	-.034	-.029	-.247
C8	.582	.348	.045	.169	-.183	.190
C9	.546	.206	-.186	.280	-.150	.331
C10	.556	.234	-.337	.238	-.101	.313
C11	.584	.212	-.409	.188	-.222	-.029
C12	.565	.179	-.419	.186	-.167	-.170
C13	.635	.180	-.259	.097	-.024	-.258
C14	.526	.090	-.345	-.188	.167	.031
C15	.560	-.145	-.039	-.315	.310	.297
C16	.639	-.142	-.010	-.271	.259	.101
C17	.618	-.288	-.330	-.245	.041	.119
C18	.626	-.276	-.241	-.231	.106	.024
C19	.643	-.268	-.163	-.222	-.006	-.125
C20	.642	-.251	-.084	-.159	-.039	-.137
C21	.603	-.252	-.151	-.174	-.175	.138
C22	.598	-.121	.279	-.087	-.106	.224
C23	.608	-.092	.305	-.057	-.293	.197
C24	.499	.029	.573	-.052	-.208	.081
C25	.619	-.101	.261	-.094	-.448	-.074
C26	.647	-.195	.110	-.130	-.344	-.171
C27	.628	-.247	.006	-.044	-.202	-.279
C29	.612	-.182	.138	.287	.108	-.036
C30	.575	-.264	.092	.347	.221	.158
C31	.603	-.316	.035	.342	.227	.192
C32	.623	-.195	.230	.331	.092	-.114
C33	.581	-.228	.097	.268	.192	-.152

C34	.580	-.121	.151	.218	.272	-.256
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Extraction Method: Principal Component Analysis.^a

a. 6 components extracted.

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
C1	.105	.671	.023	.186	.244	-.086
C2	.153	.649	.092	.199	.282	.030
C3	.149	.735	.133	.181	.179	.120
C4	.154	.774	.188	.092	.022	.117
C5	.127	.633	.231	.125	.077	.330
C6	.172	.484	.117	.125	.248	.428
C8	.020	.397	.152	.310	.528	.064
C9	.127	.182	.200	.168	.684	.005
C10	.214	.192	.152	.053	.728	.060
C11	.203	.164	.103	.078	.619	.413
C12	.198	.161	.140	.019	.519	.513
C13	.234	.321	.226	.045	.341	.502
C14	.515	.297	.066	-.080	.267	.183
C15	.660	.292	.207	.104	.076	-.201
C16	.611	.325	.274	.156	.033	-.006
C17	.731	.029	.160	.139	.219	.146
C18	.683	.095	.227	.134	.123	.178
C19	.597	.102	.223	.240	.062	.315
C20	.511	.112	.263	.291	.062	.311
C21	.549	.007	.136	.363	.248	.132

C22	.297	.222	.269	.528	.139	-.102
C23	.214	.184	.211	.660	.199	-.026
C24	-.005	.343	.234	.673	-.008	-.073
C25	.175	.146	.144	.720	.124	.263
C26	.317	.099	.185	.588	.081	.369
C27	.335	.061	.294	.411	.048	.450
C29	.174	.148	.612	.232	.163	.123
C30	.237	.068	.682	.143	.228	-.069
C31	.306	.026	.697	.133	.260	-.074
C32	.103	.161	.673	.286	.106	.166
C33	.203	.133	.639	.139	.067	.199
C34	.163	.276	.624	.091	-.020	.246

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 8 iterations.