QUALITY-OF-LIFE: "I DID IT MY WAY"

Stèfan Krüger

Faculty of Economic and
Management Sciences

13 April 2018

INAUGURAL LECTURE

of

Professor Stèfan Krüger

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QUALITY-OF-LIFE: "I DID IT MY WAY"

AN INAUGURAL LECTURE

BY

STÈFAN KRÜGER

Professor in Positive Psychology

WorkWell Research Unit

Faculty of Economic and Management Sciences

North-West University, Potchefstroom, South Africa

Friday, 13 April, 2018

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The Vice-chancellor, North-West University, South Africa

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Deputy Vice-chancellors, North-West University, South Africa

Deputy Vice chancellor: Research and Innovation, North-West University, South Africa

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Academic employees of the Faculty of Economic and Management Sciences, North-West University, South Africa

Employees of the research entity (WorkWell Research Unit for Economic and Management Sciences) and others, North-West University, South Africa

Colleagues from other universities

Family and friends

Abstract

Quality-of-Life (QoL) as a multidimensional concept has been receiving more attention from a very small group of researchers including myself, especially within the South African context. Main topics for discussion is the deconstruction of QoL and include constructs such as satisfaction with life (SWL), psychological happiness (PH) as well as subjective well-being (SWB), which forms part of the larger science of positive

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psychology. My research goals were set based on my national and international research standing in testing shorter Likert scales, instead of longer international Likert scales with a direct focus on various South African cultures. These include, Goal 1: Testing Likert scales measuring QoL; Goal 2: Testing Likert scales measuring SWL; Goal 3: Testing Likert scales measuring PH; Goal 4: Testing Likert scales measuring Life Domains and Goal 5: Testing Likert scales measuring Quality of Work-life domains. I have found that QoL, SWL and PH are perceived differently by individuals whose mother tongue includes one of the eleven official languages in South Africa. It is time to develop South African measuring instruments in relation to QoL, SWL and PH, which should be understood by all citizens.

Keywords: Quality-of-Life, Satisfaction With Life, Psychological Happiness, Positive Psychology, Likert scales, South African Cultures

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1.   INTRODUCTION

Research in Quality-of-Life (QoL) as a multidimensional concept (psychological happiness, satisfaction with life, subjective well-being) with respect to positive psychology and social sciences from the perspectives of individuals, communities and the broader business environment has been gaining some momentum in recent years. Therefore, QoL has been receiving more attention from a very small group of researchers (myself), especially within the South African context. Among this small group of researchers, in my research, with a focus on QoL as a multidimensional concept in different settings of positive psychology and social sciences, no question is more visible and substantive in this field of research (well-referenced researcher) with a

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focus within the South African context. I sustained scholarly activities in the area and have been producing a good number of papers in respected (DHET, SSI, IBBS) journals (conference proceedings) that are bringing further research/academic reputation to me and our university. Based on the opinion of national and international academics/researchers, I have become a leading researcher in my research focus area: that of QoL as a multidimensional concept.

I hereby would outline the following main areas of QoL as a science that I would present at this inaugural lecture: *Traditional psychology vs. Positive psychology; Explaining the concept, QoL; QoL – objective indicators; QoL – Subjective indicators; Satisfaction With Life (SWL); Psychological happiness*; *Life domains and Quality-of-work-life domains* (QW-LD). Goals 1 to 5 of my research focus area would follow in this lecture. These goals are set out as follows: *Goal 1: Testing Likert scales measuring QoL; Goal 2: Testing Likert scales measuring SWL; Goal 3: Testing Likert scales measuring Psychological Happiness; Goal 4: Testing Likert scales measuring Life Domains and Goal 5: Testing Likert scales measuring Quality of Work-life domains.* Furthermore, I would provide a conclusion with suggestions for future research to be conducted.

2.   MAIN AREAS OF QUALITY-OF-LIFE AS A SCIENCE

2.1   *Traditional psychology vs. positive psychology*

Often, traditional psychology is concerned with what is wrong with society/individuals at large. The goal of traditional psychology is to make individuals less miserable between neurosis; pathology in studying the psychological roots of origin in the mind and mental illnesses (Vygotsky, Rieber, & Carton, 1997; Test Prep Gurus, 2012; Kotov, Krueger, & Watson, 2018).

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Examples of traditional psychology are as follows:

Cognitive psychology: Human intelligence; perception, memory, problem-solving and hinking (Online Psychology Degrees, 2017).

Forensic psychology: Exploration of the mind behind the crime (Centre of Excellence, 2017).

Clinical psychology: Understanding and relieving psychologically-based distress or dysfunction (Mathew, 2011).

Social psychology: Social influence (behaviour affected by the presence of others); social cognition (what individuals think of others); and social interaction (how individuals relate to others) (Foregas, & Baumeister, 2018).

Abnormal behaviour psychology: Attention deficit disorder, disruptive disorder, anxiety and depression, and suicidal tendencies (Miller, 2015).

Sport psychology: Psychological factors affect performance (City College, 2017).

Development psychology: How individuals change over time (Ellis, 2017).

On the other hand, positive psychology could be viewed as a scientific study about what makes life most worth living among individuals, different cultures, various populations and is not there to replace traditional psychology (Test Prep Gurus, 2012; Antoine, Dauvier, Andreotti, & Congard, 2018; Cabanas, 2018). Positive psychology represents a science in testing a number of theories against evidence. It is not a secret tool used by positive psychology researchers/practitioners and it is important that individuals should avoid untested self-help procedures, such as "fly by night motivational speakers" or "new age

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philosophy" (Test Prep Gurus, 2012; Vela, Smith, Whittenberg, Guardiola, & Savage, 2018).

The main goal of positive psychology, in the same vein, is to make normal life more worthwhile and fulfilling (Test Prep Gurus, 2012). It asks the question: What is right with you as a positive functioning (Snyder, Lopez, & Pedrotti 2010)? Positive psychology is considered to increase the subjective well-being of individuals and could consist of positive aspects in life, such as: *subjective well-being, SWL, happiness positive affect, positive engagement, positive relationships, social systems, pleasant life, engaged life and a meaningful life* (Carr, 2011).

2.2   *Explaining the concept quality-of-life*

I am of the point of view that there is no precise definition of the term QoL in literature. This term is often viewed as vague with many different understandings. Aristotle (384-322 *BC*), from a philosophical perspective, viewed QoL as societies that are satisfied with their lives, which could be articulated as *flourishing*, *subjective well-being*, *individuals leading a purposeful and meaningful life across various societies* (Ostenfeld, 1994; Sirgy, 2012; Venter, 2017; Venter & Kruger, 2017). The beginning of QoL locates in the social indicators movements of the 1960s (freedom of speech, welfare of all citizens, access to food water, shelter and clothing (Andrews & Withey 1976; Campbell, Converse & Rodgers, 1976; Diener, 1984; Kruger *et al.,* (2013); Rootenberg, 2013 & Sirgy, 2001). QoL can be explained as the extent to which certain desirable factors are attained or retained by individuals (Nugent, Lewis, & O'Sullivan, 2013). These may include concepts such as *well-being*, (happiness, discreet emotions/feelings of being pleased, avoidance of being stressed, positive overall cognitive health) (Nugent, Lewis, & O'Sullivan, 2013; Van Cappellen, Rice, Catalino, &

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Fredrickson, 2018) and *interpersonal relations* (daily interactions with others & healthy participation in society).

2.3   Quality-of-Life: Objective indicators

According to Kim, (2002), and Rootenberg (2013), QoL – objective indicators could be explained as "hard" methods used in rating statements, without including subjective aspects of well-being. The objective indicators of QoL may furthermore include *economic well-being measures* (e.g. state subsidy holders, general income of citizens, employment opportunities, job security, unemployment, quality of jobs and a focus on economic development) (Reimers 2006; Sirgy, 2012), as well as *social well-being measurers* (e.g. cultural integrity, leisure and recreation opportunities in a community, family structure, social networks, historical infrastructure of a country, crime rate, number of people in prison, illiteracy, educational attainment, student dropout, teenage pregnancy, suicides, and resources spent on law enforcement) (Sirgy, 2012; Caddick & Smith, 2014). *Environmental well-being measures* include crowding – China, noise, social pollution, litter, traffic congestion, driving hazards, as well as air and water pollution (Sirgy, 2012; Tuljapurkar, 2016). *Health well-being measurers* include prominence of cardiovascular disease, diabetes, number of people in psychiatric facilities, doctors per capita, immunisation against dreadful diseases, terminal illnesses such as cancer, HIV and tuberculosis (Sirgy, 2012; Caddick & Smith, 2014).

2.4   Quality-of-Life: Subjective indicators

The subjective indicators of QoL are guided by the capturing of experiences that are important to the individual at large. Some measurers may include factors such as happiness, job satisfaction, sense of pride due to community belonging, relationships with significant others, social

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relationships, stress levels in society, SWL overall, overall feelings of well-being, standard of living conditions and religious views (Wilson, 1969; Sirgy, 2012; Caddick & Smith, 2014). The subjective indicators of QoL may further be divided by including the following concepts:

Values: Principles or standards of behaviour; one's judgement of what is important in life;

Attitudes: A settled way of thinking or feeling about something or a particular mental state;

Beliefs: Something one accepts as true or real or of self-opinion; and

Motives: A reason for doing something (Gosling *et al.,* 2003; Andrews & Whithey, 2012; Sirgy, 2012; Naude, 2016; Naude, Kruger…*et al.,* & Michalos, 2017).

2.5   *Satisfaction With Life*

SWL is a cognitive concept that involves individuals' evaluation or judgement of their life overall. This concept could further be explained as the fulfilment of individual needs, goals and wishes (Sirgy, 2002; 2012). SWL is often interchangeably used by positive psychology scholars as quality of life, life satisfaction, life quality and happiness (Pennock, 2015). As a notorious perception, SWL includes a combination of collective action (Somma, 2017); individual behaviour (Martela, Ryan, & Steger, 2017); simply sensory experiences (Lyu, Mao, & Hu 2018); as well as higher cognition and stable characteristics of the individual (Carlquist, Ulleberg, Delle Fave, Nafstad, & Blakar, 2017; Smyth, Zawadzki, Juth, & Sciamanna, 2017; Veenhoven, 1996). SWL can be measured as guided by Diener (2009); (Emerson, Guhn, & Gadermann, 2017; Kruger, Sirgy, Lee, & Grace, 2015). *In most ways, my life is close to my ideal; The conditions in my life are excellent; I am*

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satisfied with my life; So far, I have gotten the important things I want in life; If I could live my life over, I would change almost nothing.

2.6   *Psychological happiness*

The term psychological happiness is a broad umbrella concept, covering aspects such as feelings of joy, serenity and affection, and is often synonymously referred to in literature as SWL, subjective well-being, subjective QoL, life chances, feelings affecting overall happiness, life results, live-ability of environment, and usefulness in life (Veenhoven, 1984, 2015). Psychological happiness: positive affect include feelings such as *Life gives me pleasure, Life excites me, I feel at peace with life, I appreciate the life I lead, I completely accept life as it is, I am content with life,* whereas psychological happiness: negative affect include feelings such as *I feel pain about my life, I feel upset about my life, The life I lead gets me down, I worry about the life I lead, I feel I am wasting my life* (Şimşek, 2009). Psychological happiness as a concept could furthermore emphasise the perceived enjoyment of society in relation to their life as a whole; this could be in the past, present or future, based on the cognitive function of society (Kruger, Saayman & Ellis, 2014).

2.7   *Life- and quality-of-work-life domains*

Affective experiences are segmented into various life spheres; or as we as positive psychology researchers call them, life domains. Our memory (conscious, subconscious and unconscious) could be divided into many domains of life. In each life domain, individuals have deep-rooted cognitions, reflecting affective experiences in a specific domain. Positive affect includes discreet emotions/feelings such as *enthusiasm*, *interest*, *determination*, *excitement*, *being inspired*, *alert, active, strong*, and *joyful*, *experiencing pleasure and pride and being attentive in a*

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positive *state* *of* *mind*. Negative affect includes discreet emotions/feelings, such as *being scared*, *afraid*, *upset*, *distressed*, *jittery*, *nervous*, *ashamed*, *guilty*, *irritated*, *sad*, *depressed*, *anxious*, *angry* and *hostile* (Venter, 2017). Examples of various life domains could be: *Culinary life; emotional life; work life; financial life; family life; intellectual life; leisure and recreation life; social life; health and safety life; the self; spiritual life; financial life* and *love life* (Smith & Puczkó, 2012; Sirgy, Kruger …et al., 2010; Frisch, 2014). On the other hand, with a focus on the workplace context, the following QW-LD had been used within the South African context and would be elaborated on under the heading *Goal 5*. QW-LD could be viewed as many different life spheres, which have a direct positive or negative affect on individuals in the workplace. These are *health and safety QW-LD*; *psychological health and safety QW-LD; economic and family QW-LD; social QW-LD* (*working relations*; *social QW-LD*78); *work arrangements; esteem QW-LD* (*feeling good at work*); *my work at the workplace; actualisation QW-LD* (*personal potential*); *life potential; knowledge QW-LD* (*learning opportunities*; *commitment to learning*); *creativity and aesthetics QW-LD; feelings about the establishment QW-LD* (*positive feelings about the establishment*); *negative feelings about establishment*; *management QW-LD* (*feelings about management); leisure QW-LD* (*leisure preferences)* and (*leisure time)* (Naude, Kruger…et al., 2012; Naude, Kruger…et al., 2015; Naude, Kruger…et al., 2016).

The following goals were set based on my national and international research standing and would form the main topic as discussed in my inaugural lecture.

3.   Goal 1: Testing Likert scales measuring Quality-of-Life

During 2008, Professor Danie Petzer and I (Kruger & Petzer, 2008) started off with research in measuring QoL in a social setting. This

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was my first attempt at measuring QoL guided by only four statements. A total of [1]N = 317 participated in this research project. We made use of a shorter labelled Likert scale (as often found in international literature, where longer Likert scales are used). The Likert scale oscillated between *1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree*. QoL as a factor in this instance attained a ([2]α = 0.93), which was very high for such a short Likert scale used. It should be remembered that a general guidance for an acceptable α = 0.07. This result pathed the way to start experimenting with the Likert scale used in measuring QoL.

A study (Kruger, Rootenberg, & Ellis, 2013) done on individuals attending a wine festival was published in 2013. Here, I focused on validating a scale measuring QoL within the South African context.

Five questionnaire statements were used based on a labelled five-point Likert scale, ranging between *1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree*. It is important here to take note that the Likert scale labels have been reverse scored as has been done in other research projects. QoL, in this instance, achieved an α = 0.90 and a ([3]r_{mean} = 0.61). The α result is indicative that the psychometric properties of this reverse score labels and scale are also reliable.

In another study, I tested a Likert scale measuring QoL consisting of only three questionnaire statements with an aim on N=158 participants. A five-point labelled Likert scale (*1 = don't agree at all, 2 = don't agree, 3 = neutral, 4 = agree, 5 = totally* agree) was used (Kruger *et al.*, 2015). QoL in this instance attained an acceptable α = 0.82 (r_{mean} = 0.45) and a [4]($\bar{x}$ = 4.54 ± S_D 0.50). It is important to take note here that the labelling of the Likert scale measuring QoL has been changed to suit the specific study population.

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More recently, Venter and Kruger (2017; 2018) conducted research among a study population of N = 119. QoL in this instance was measured making use of a web-based survey. Studies done on QoL research by Sirgy *et al.,* (2011), Kruger *et al., (*2013), and Kruger *et al., (*2014) produced acceptable reliabilities ≥ 0.07; however, in the current study, QoL attained an α = 0.91, r_{mean} = 0.72, and $\bar{x}$ and S_D 3.87 ± 0.70. The high α is indicative of the fact that the Likert scale used is very reliable and can be used within the South African context as a valid measure.

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4. Goal 2: Testing Likert scales measuring Satisfaction With Life

I had the opportunity to invite Professor Joe Sirgy, a leading research scholar in QoL research around the globe, during 2008 as the main host.

After his visit, it became clear that a lack of research exists pertaining to QoL as a multidimensional concept within the South African context. Since 2008, I started as an established researcher, focusing on this specialised niche area of research. During 2010 (Sirgy, Kruger, Lee, & Yu, 2010), I was involved in a research project, measuring SWL among a South African study population of N = 264 individuals. We developed a seven-point unlabelled Likert scale (*very dissatisfied= 1 2 3 4 5 6 7 = very satisfied*), measuring SWL (5 statements). SWL achieved an α = 0.88 and a composite reliability of 0.91. Although acceptable reliability was achieved, we found it difficult to administer the questionnaire, as many respondents indicated that they were not too sure how to rate the statements on the unlabelled Likert scale provided. This led me to start thinking of shortening the Likert scale (5 point) and that I should start focusing on a labelled Likert scale (*1 = very dissatisfied, 2 = dissatisfied, 3 = neutral; 4 = satisfied, 5 = very satisfied*) in future research measuring SWL.

In another research project with international researchers (Kruger *et al*., 2015) in a South African setting, a total study sample of (study 1 - N = 228; study 2 - N = 254) participated in this research measuring SWL. I used the shortened version of the Likert scale, as suggested earlier (*1 = very dissatisfied, 2 = dissatisfied, 3 = neutral; 4 = satisfied, 5 = very satisfied*). In conducting the statistical analyses, SWL achieved an α = of 0.79. This was a very interesting statistical finding, which many international and national researchers commented on at conferences, and

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we used only three statements measuring SWL as suggested otherwise by Diener (2009). Many publications in accredited national and international journals followed as well as incorporating the SWL measure in post-graduate studies.

In furthering my research expertise as an established and well referenced researcher testing and shortening international Likert scales pertaining to my research focus, in 2012 supervising a post-doctoral student (Cini, Kruger, & Ellis, 2012), I used the SWL statements based on the 2010 study, but changed the labelling of the Likert scale used. However, within this context, we included a labelled five-point Likert scale (*1 = strongly disagree, 2 = disagree, 3 = neutral; 4 = agree, 5 = strongly agree*), which N= 389 participants in South Africa completed. From a psychometric point of view, the shortened Likert scale showed high levels of internal consistency (α = 0.84). We gained an understanding of the type of study population, where they could complete the measuring instrument much quicker by rating statements on the shorter five-point version than in previous studies.

On the other hand, Van Loggerenberg *et al.,* (2012), where we further used the SWL statements based on the 2010 study (Diener *et al.,* 1985), testing the longer seven-point Likert scale with a study population of N= 207. The labelling had been changed to suite the study. In this case, we labelled the Likert scale (*1 = strongly disagree – 7 = strongly agree*), which added to the methodology. SWL attained a α = 0.84, which was again indicative that the Likert scale used was reliable and suitable to be used in future research.

As time went on, experimenting with Likert scales with a focus on different study populations, I became very interested within my research focus in fitting models to data collected from longitudinal surveys. My interest reflects expansion in requirements by managers for

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in-depth studies of social processes over time depicting linear relationships among constructs. An article was published in 2014, in collaboration with international researchers (Lee, Kruger, Whang, Uysal, & Sirgy, 2014), based on longitudinal data gathered from (N=1727) respondents over a four year period. SWL (well-being) was measured on a labelled five-point Likert scale ranging from *1 = very poor to 5 = excellent*. Well-being has been divided in this case between high-order needs (motivating factors, e.g. spiritual discovery) and low-order needs (hygiene factors, e.g. relaxing). For high-order need satisfaction, acceptable reliabilities (0.72, 0.72, 0.68 and 0.71) were achieved; however, for low-order need satisfaction, some of the reliabilities were low (0.61, 0.61, 0.57 and 0.61). Therefore, the composite low order need satisfaction score was computed by averaging the scores of the five items. The low α for low-order needs could be distinct to the study populations, and cannot be generalised to that of other study populations. I have suggested that the Likert scale should be used in other longitudinal studies, to see whether the α could improve. The possibility to reverse score the Likert scale in future research could be an option in this case.

Kruger and Sonono (2016) conducted research and, in this article, the time sensitivity of measuring SWL was the main focus. Previously, SWL had been measured at the present time in question. However, it became time to explore measuring SWL based on past experiences, as rated by the study population in question. I made used of a seven-point Likert scale (*1 = strongly disagree – 7 = strongly agree*) (Diener, 2009; Ho, Cheung & Cheung, 2008) as it was my first time measuring SWL in the past tense (lengthy period of time). The statistical results produced an acceptable $\alpha = 0.75$, $r_{mean} = 0.39$, $\bar{x} = 4.98 \pm S_D = 1.27$. Among all factors, SWL, in this instance, obtained the highest ($\bar{x}$).

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5.   Goal 3: Testing Likert scales measuring happiness within the broader context

Through an extensive literature review, it became evident that most measuring instruments with a focus on overall happiness (Veenhoven, 2012), psychological happiness (Sirgy, 2002) and prudential happiness (Haybron, 2000) were not developed from a fixed theoretical model within the context of my research focus area (Kruger *et al.,* 2014). Therefore, I have introduced, based on the data, a theoretical model, with a focus on testing happiness statements on a labelled five-point Likert scale (*1 = not at all, 2 = very little, 3 = neither little nor much, 4 = very much, 5 =completely*) among N= 375 respondents. In this measure, I used three questionnaire statements measuring happiness. It is important here to note that the labelling of the Likert scale is different compared to many guidelines provided by international researchers as indicated above. Happiness attained an $\alpha = \geq 0.07$, which from a psychometric point of view, is that the Likert scale used was very reliable and can be used in future research projects.

In another research project, by Naude, Kruger…*et al.,* (2016), happiness within the work context had been explored. Happiness at work statements (8) were guided by Chiumento (2007) and no Likert scale had been provided based on literature consulted. We used a labelled five-point Likert scale (*1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree*) measuring happiness based on experimenting with Likert scales in previous studies. From a psychometric view of the Likert scale used in previous studies, it was deemed suitable to use the five-point Likert scale as indicated above. In this instance, happiness attained an $\alpha = 0.76$. The result is acceptable and could be attributed to the large study population.

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In another research project, we tested a Likert scale measuring psychological happiness (Modise, 2014; Kim, 2015). The study population for 2014 was N = 200 and for the 2015 was N = 114. The scale tested positive and negative affect, directed towards psychological happiness. Respondents rated the statements on a five-point Likert scale (*1= strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 =agree, 5 = strongly agree*). For the 2014 research project, psychological happiness as one factor reached a α = 0.90, r_{mean} = 0.40, and $\bar{x}$ and S_D = 3.04 ± 0.65. However, in the 2015 research project, psychological happiness was divided into two factors. Happiness: positive affect attained a α = .70, r_{mean} = 0.45, and a $\bar{x}$ and S_D = 4.12 ± 0.70. Happiness: negative affect obtained a α = 0.94); (r_{mean} = 0.70) and a ($\bar{x}$ and S_D = 2.02 ± 1.03). In this case it is evident that happiness positive affect achieved the highest ($\bar{x}$) for both projects.

6.   Goal 4: Testing Likert scales measuring life domains

In a study by Sirgy, Kruger…*et al.,* (2010) we identified 13 life domains as a first within the South African context. The following life domains were emergent from the qualitative study: *social life; leisure and recreation life; family life; love life; arts and culture; work life; health and safety life; financial life; spiritual life; intellectual life; the self-life; culinary life and travel life*. These life domains had been included in the measuring battery and used for the quantitative study. As guided by the top-rated researcher in QoL research at that time, we developed a nine-point unlabelled Likert scale. The Likert scale extended from *1 = no, not at all – 7 = yes, much so* and with two additional options *8 = I don't know, 9 = does not apply*. Thirteen confirmatory factor analyses had been done on each of the life domains, as initial statistical calculations on computing the α were not that good ≤ 0.07. Some statements had been removed to produce better results. The α's ranged

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between 0.62 to 0.92 (positive affect associated in life domains) and 0.70 to 0.93 (negative affect associated in life domains) (Sirgy, Kruger *et al.,* 2010). The psychometric properties of this long Likert scale were somewhat reliable. This was a very long Likert scale that respondents had to rate the statements on. I am now from a point of view that the shorter versions of the Likert scales used are a better option, as time limitations are very important in the type of research that I am conducting, particularly in administering the measuring battery to a niche study population.

In the same vein, I started experimenting with a shorter labelled five-point Likert scale measuring life domains. This was guided by time limits available in administering the measuring battery to the study population concerned (Kruger *et al.,* 2013). In this research project, we made used of only five life domains. The five-point labelled Likert scale consisted of *1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree*. The following life domains achieved acceptable α: *Leisure and recreation life* α = 0.86; r_{mean} = 0.68; $\bar{x}$ and S_D = 4.42 ± 0.70. *Intellectual life* α = 0.90; r_{mean} = 0.61; $\bar{x}$ and S_D = 4.01 ± 0.83. *Culinary life* α = 0.76; r_{mean} = 0.41; $\bar{x}$ and S_D = 4.42 ± 0.70. *Social life* α = 0.75; r_{mean} = 0.44; $\bar{x}$ and S_D = 4.54 ± 0.56. *Travel life* α = 0.76; r_{mean} = 0.41; $\bar{x}$ and S_D = 4.42 ± 0.70. These results reflect that the shorter Likert scale is very reliable and I incorporated this version of the Likert scale in many research projects and postgraduate studies.

In a research project, Venter and Kruger (2017) furthermore tested a Likert scale measuring life domains. In the 2017 research project, the following life domains had been used: *social life* and *self-life*. These life domains had been measured on a five-point Likert scale (*1= strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 =agree, 5 = strongly agree*). In this instance, for each life domain, positive and

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negative affect had been included in the statistical analyses. Therefore, in testing the reliability of the Likert scale used, *Social life – positive affect* attained a α = 0.81, r_{mean} = 0.50, $\bar{x}$ and S_D = 3.90 ± 0.60; *Social life – negative affect* scored a α = 0.76, r_{mean} = 0.46, $\bar{x}$ and S_D = 2.68 ± 0.84. *Self-life positive affect* attained α = 0.83, r_{mean} = 0.62, $\bar{x}$ and S_D = 3.75 ± 0.78, followed by *Self-life negative affect*, α = 0.96; r_{mean} = 0.96; $\bar{x}$ and S_D = 1.50 ± 0.67. Based on this research project's reliability results, it is clear that the Likert scale used here is very reliable.

In the 2018 research project, Venter and Kruger (2018) tested only one life domain, that of *leisure and recreation life*. The five-point Likert scale consisted of the following labels: *1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree*. In this article, *"affect"* was also measured. *Leisure and recreation life positive affect* scored a α = 0.75, r_{mean} = 0.43, $\bar{x}$ and S_D = 4.13 ± 0.64. *Leisure and recreation life negative affect* achieved a α = 0.74, r_{mean} = 0.48, $\bar{x}$ and S_D = 2.19 ± 0.87. A possible explanation for the α that falls just in the acceptable range could be attributed to the large study sample that of 506 respondents. However, the r_{mean} fell within an acceptable range and we could accept that the Likert scale is reliable.

7.   Goal 5: Testing Likert scales measuring Quality of work-life domains

In an article published by Naude, Kruger…*et al.,* (2012), we initially, as a first time in South Africa, tested a Likert scale measuring QW-LD. Based on guidance by Sirgy *et al.* (2001), we made use of an unlabelled international seven-point type Likert scale ranging from *1 = very true – 7 = very untrue*. The following QW-LD had been identified and the reliabilities will be reported on. *Health and safety QW-LD = Physical health & safety* α = 0.78, r_{mean} = 0.46, $\bar{x}$ = 2.78, *psychological health and safety QW-LD* α = 0.52, r_{mean} = 0.35, $\bar{x}$ = 2.05. *Economic and*

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family QW-LD α = 0.90, r_{mean} = 0.53, $\bar{x}$ = 3.47. *Social QW-LD, working relations* α = 0.84, r_{mean} = 0.47, $\bar{x}$ = 2.97, *Social QW-LD,* α = 0.78, r_{mean} = 0.54, $\bar{x}$ = 2.46, *Work arrangements,* α = 0.60, r_{mean} = 0.33, $\bar{x}$ = 3.25. *Esteem QW-LD = Feeling good at work*, α = 0.78, r_{mean} = 0.38, $\bar{x}$ = 3.18, *My work at the workplace*, α = 0.67, r_{mean} = 0.40, $\bar{x}$ = 1.75.

Actualisation QW-LD = personal potential, α = 0.89, r_{mean} = 0.63, $\bar{x}$ = 3.15, *Life potential*, α = 0.65, r_{mean} = 0.48, $\bar{x}$ = 2.40. *Knowledge QW-LD = learning opportunities*, α = 0.90, r_{mean} = 0.65, $\bar{x}$ = 3.02, *commitment to learning*, α = 0.38, r_{mean} = 0.26. Commitment to learning was measured with two statements. *IBM SPSS Statistics for Windows version 22.0 software (IBM, 2013)* generated one factor. Therefore, no $\bar{x}$ has been reported on. *Creativity and aesthetics QW-LD =* α = 0.83, r_{mean} = 0.55, $\bar{x}$ = 3.12. *Feelings about the establishment QW-LD = positive feelings about the establishment*, α = 0.85, r_{mean} = 0.48, $\bar{x}$ = 2.73, *negative feelings about establishment*, α = 0.71, r_{mean} = 0.38, $\bar{x}$ = 3.87. The statements measuring *negative feelings about the establishment* were in negative format. However, we have reverse scored the Likert scale to make the statements more positive. We consequently found that the Likert scale was more reliable: *Management QW-LD = feelings about management*, α = 0.82, r_{mean} = 0.53, $\bar{x}$ = 2.78. Finally, for the purposes of this lecture, the *leisure QW-LD* was used as a controllable variable. The following reliabilities had been reported on as the *leisure QW-LD* consisted of two factors: *leisure preferences*, α = 0.79, $\bar{x}$ = 0.49; *leisure time*, α = 0.75, $\bar{x}$ = 0.65. Therefore, leisure time attained the highest median. It could be interpreted that employees, as part of the study population, value *leisure time* as very important, due to the long working hours they engage in, as they do not have much leisure time at their disposal.

Although some of the work-life domains did not reach satisfactory reliabilities, the r_{mean} fell within an acceptable range. The

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factor structures and statements had been used to be incorporated in future research projects. However, the Likert scale will be shortened in future projects, to make it more time sensitive.

A research project (Viljoen, Kruger…*et al.,* 2014) with a total study sample of N = 224, tested the shorter version of a proposed Likert scale in measuring QW-LD. The labelling of the Likert scale (*1 = do not agree at all, 2 = do not agree, 3 = neutral, 4 = agree, 5 = totally agree*) had been altered to meet the goal of this research. Pertaining to the statistical results, the following QW-LD's achieved the following reliabilities based on the Likert scale used. *Job attributes QW-LD,* α = 0.74, $\bar{x}$ = 2.04 and S_D = 0.55. *Social QW-LD,* α = 0.80, $\bar{x}$ = 3.68 and S_D = 0.92. *Esteem QW-LD,* α = 0.74, $\bar{x}$ = 2.04 and S_D = 0.88. *Actualisation QW-LD,* α = 0.90, $\bar{x}$ = 3.22 and S_D = 1.04. *Creativity and aesthetic QW-LD*, α = 0.82, $\bar{x}$ = 3.23 and S_D = 1.04, *Organisational support and employee commitment QW-LD*, α = 0.86, $\bar{x}$ = 3.62 and S_D = 0.90. *Service and productivity QW-LD*, α = 0.83, Mean $\bar{x}$ = 4.00 and S_D = 0.78. It is interesting to note that *service and productivity QW-LD* attained the highest mean. Therefore, participants rated this QW-LD as very important.

In two articles, based on a research project during 2015 and 2016 (Naude, Kruger…*et al.,* 2015; Naude, Kruger…*et al.,* 2016) a shorter five-point Likert scale (*1= strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 =agree, 5 = strongly agree*) had been used to measure statements pertaining to QW-LD. This was once again a first within the South African context. We computed the Omega reliability (ω) for all QW-LD's pertaining to this research project based on M-plus software used (Muthén, & Muthén, 2012). The following QW-LD's attained acceptable reliabilities ≥ 0.07: *leisure time,* ω = 0.70; *leisure preferences*, ω = 0.75; *health & safety*, ω = 0.66; *economic and family*, ω

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= 0.80; *social,* ω = 0.70; *esteem,* ω = 0.80; *actualization*, ω = 0.87; *knowledge*, ω = 0.87; *creativity*, ω = 0.85 and *feelings about the company*, ω = 0.78. The safety QW-LD did not reach an acceptable reliability; however, one should take note that this work-life domain had been measured on a five-point Likert scale. The large study population of N = 1502 could have had an effect on the results. It seems, based on the above results, which the safety QW-LD was not a bigger issue to deal with, such as actualisation and knowledge issues.

8.   Conclusion and suggestions for future research

Research in QoL as a multidimensional concept (happiness, SWL, subjective well-being) with respect to social sciences from the perspectives of individuals, communities and the broader business environment has been gaining some momentum in recent years and has been receiving more attention from a very small group of researchers (myself), especially within the South African context. Among this small group of researchers, in my research, with a focus on QoL as a multidimensional concept in different settings of the social sciences, no question is more visible and substantive (well-referenced / established researcher) with a focus on the South African context. I sustained scholarly activities in the area and have been producing a good number of papers in respected (DHET; ISI; ISSN & IBBS) journals (conferences) that are bringing further research/academic reputation to me and the North-West University. Based on the opinion of national and international researchers, I have become a leading scholar in my research focus area, directed towards the social sciences within the broader context. I am also from the point of view that the five-point Likert scales could also be reduced to four-point Likert scales.

My future research in the Social Sciences, with respect to QoL as a multidimensional concept, will focus on methodologies based on

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standardising the Likert scales used as well as developing new measurers and Likert scales and literature around the globe.

My on-going research, furthermore, will focus on QoL as a multidimensional concept, which will focus on individuals, employees (managers) and previously disadvantaged communities. For instance, the term *quality-of-life* has different meanings in various South African cultures. In isiXhosa, QoL is referred to as "umgangatho wobomi" and in isiZulu "ikhwalithi yokuphila", which could be translated as "the general well-being of individuals and societies, including not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging". In English, QoL is referred to as "the extent to which their life is comfortable or satisfying. The general well-being of a person or society, defined in terms of health and happiness, rather than wealth" (Glosbe, 2018; Delle Fave, 2017). Therefore, in a communication with some of the cultures in South Africa, the terms QoL, SWL, PH and SWB have been interpreted in various ways and no consensus has been reached about what these terms actually mean. I am intending to start a measuring instrument including the 11 official languages in South Africa, measuring QoL, SWL and happiness. The measuring instrument could be listed in a QoL South African Encyclopaedia with a focus on positive psychology-related explanations as perceived by individuals. The focus of time sensitivity based on the Likert scales used will be implemented to measure goals 1 to 5 in future tenure, to gain an understanding of how long-lasting QoL is experienced. This will add valuable results and information to literature and methodologies, as no literature and methodologies are available (if so, very scarce) in testing future directions of the Likert scales. On the other hand, my focus will furthermore be in validating the Likert scales within the South African context used in objectives 1 to 5. Furthermore, I would like to explore an

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avenue, focusing on neuro-sciences, linking it within the broader context of QoL research. Future directions are also to collaborate with national and international researchers, contributing to case studies with a direct focus on industry with managerial implications, a book based on my specific research focus, as one of three editors. My goal would be to become a well-referenced social scientist, supervisor/promoter and to develop a broad network of researchers who share my passion for research based on objectives 1 to 5. On a final note, I would become a certified QoL community coach, therefore enhancing the QoL of individuals in South Africa.

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