

**UNIVERSITY OF THE WESTERN CAPE**  
**Faculty of Community and Health Sciences**



**Title:** Preliminary validation and Afrikaans translation of the Personal Well-Being Index – School Children amongst a sample of children in Cape Town

**Student Name:** Arnold Matzdorff

**Student Number:** 3407554

**Type of Thesis:** Master's Mini Thesis

**Degree:** M.A. Research Psychology (structured)

**Department/School:** Psychology

**Supervisor:** Dr Shazly Savahl

**Date:** 3 August 2015

**10 Keywords:** Subjective well-being, children, confirmatory factor analysis, fit indices, structural equation modelling, scale validation, Personal Well-being Index – School Children, overall life satisfaction, quality of life, South Africa

Submitted in partial fulfilment of the requirements for the degree of Master in Research Psychology at the University of the Western Cape

## **Abstract**

The construct of subjective well-being within child well-being and quality of life research has become increasingly prominent in recent years. Central to such developments is the question of to what extent children's subjective experiences of well-being can be compared cross-culturally. Given the paucity of empirical research on the topic of cross-cultural comparisons, the importance of validating current measures of subjective well-being has been emphasized by many researchers as critical in contributing to the international dialogue. The aim of the current study was to test a measure of subjective well-being (the Personal Well-being Index – School Children) amongst a sample of children from Cape Town, Western Cape Province, South Africa. Given the diversity of experience between children from different language groups in South Africa, the study further aimed to determine the extent to which the measures are comparable across two language groups (Afrikaans and English). Data from the Children's World Survey were used; and include a sample of 1004 children randomly selected from 15 schools within the Cape Town Metropole. Located within the goodness of fit theoretical framework, confirmatory factor analysis was used to test the overall fit structure and multi-group factor analysis, with Scalar and Metric invariance constraints. The results show appropriate fit structure for the overall model, with Scalar and Metric factor invariance tenable across language groups. The overall findings suggest that the Personal Well-being Index – School Children is appropriate for use with English and Afrikaans children in Western Cape Province, South Africa, and that scores between these groups can be compared by regressions, correlations, and means.

**Declaration**

I hereby declare that the following research report, ‘Preliminary validation and Afrikaans translation of the Personal Well-Being Index – School Children amongst a sample of children in Cape Town’ is my own work, and all the sources used or quoted have been indicated and acknowledged by means of complete references in accordance with the American Psychological Association referencing convention.

Arnold Matzdorff

August 2015

.....



## **Acknowledgements**

I extend my sincere thanks to all those who have helped me in the completion of my thesis, and have supported me along the way. Foremost, I thank Dr Shazly Savahl, whose assistance and guidance has proved invaluable, and without whom this thesis would not have been possible. I also thank my parents for their unwavering support, and the assistance that they have offered to me throughout my studies. I am further grateful to the National Research Fund for the funding that enabled me to complete this thesis. Lastly, I thank all of the staff at the Psychology Department of the University of the Western Cape for their help, guidance, and commitment to academic excellence, which I hope is reflected in my thesis.



## Contents

<b>Background</b>	1
<b>Aims of the Study</b>	2
<b>The context of children’s well-being in South Africa</b>	3
<b>Literature Review</b>	4
Child Well-being	4
Subjective Child Well-being	9
Empirical Initiatives in Children’s Subjective Well-being	11
Scales used to measure Children’s Subjective Well-being	14
Adaptation and Translation of Measuring Instruments in South Africa	17
History of the Children’s Worlds Project	20
Findings from the First Wave	21
Theoretical Framework	22
Goodness of Fit: Theory of Fit Statistics	25
<b>Method</b>	26
Research Context	26
Sampling	26
Instrumentation	27
Personal Well-being Index – School Children and Adolescents	27
Data Collection	29
Procedure and Ethics	29
Data Analysis	30
<b>Results</b>	31
Descriptive Statistics	31
Confirmatory Factor Analysis	31
<b>Discussion</b>	33
<b>Conclusion and Recommendations</b>	35
<b>References</b>	37



## **Background**

Research in the field of well-being and, more specifically, children's well-being, has traditionally focused on the importance of objective indicators, such as mortality rates, access to necessary services, and health statistics. However, objective indicators have been increasingly criticised on a number of grounds. Foremost of such criticisms is that objective indicators of children's well-being omit the voices of the children themselves, thus treating children as passive objects for research, instead of active subjects who interact with their social realities in a dynamic and meaningful manner (Fattore, Mason, & Watson, 2012). As a result, a strong movement has begun directed towards developing an understanding of children's subjective perceptions of their own well-being, with the aim that such knowledge should be used in conjunction with objective indicators in providing a more holistic picture of children's well-being, and thereby allowing more informed decisions to be made when children's welfare is at stake.

With recognition of the necessity for subjective indicators of children's well-being comes the concordant requirement of developing valid and reliable measures of children's subjective well-being. However, previous research in this area has focused on the development of adult measures, with the result that appropriate measures of subjective well-being for children are relatively few (Casas, Bello, González, & Aligué, 2013). More recently, this picture has begun to change, and several measures of children's subjective well-being are now available. Although the first measure of subjective well-being consisted of a single item (Cantril's Ladder), subsequent studies have demonstrated the superiority of multi-item scales (Casas et al., 2013). Specifically, multi-item scales have been shown to possess greater reliability, while also reducing measurement error (Casas et al., 2013). Nonetheless, considerable further development is required, particularly in terms of adapting and translating existing measures for use in contexts other than those in which they were initially piloted.

The importance of ensuring that valid measures of children's subjective well-being are available across a diverse array of cultural settings lies largely in the recent drive towards cross-cultural research within the field of subjective well-being. Apart from the usefulness of such descriptive indicators of child subjective well-being, cross-national comparisons are also necessary for further empirical and theoretical development, and can be useful in informing policy development (Casas & Rees, 2015). Although the adaptation of instruments for use in other cultural contexts can be a difficult process, previous studies have demonstrated the

utility of this approach (as opposed to developing new measures), with the result that instruments such as the PWI-SC, BMSLSS, and SLSS have all been validated for use in a variety of contexts. Of cardinal importance in this regard is ensuring that language-translated versions of instruments tap the same underlying constructs of interest, and ultimately provide valid and reliable information within the intended language group. Linguistic equivalence is typically insufficient for this purpose, due to differing cultural understandings of concepts such as morality, psychopathology or well-being, which are embedded in language (Widenfelt, Treffers, de Beurs, Siebelink, & Koudijs, 2005). As such, conceptual equivalence is essential, which may require extensive adaptation of the instrument in question. As a result of these considerations, when attempting to develop measures intended for use in a variety of cultural and/or language groups, it is important to ensure that the construct being measured is defined in a manner common to all groups in order to prevent systematic bias (International Test Commission (ITC), 2010). However, within South Africa, this process presents unique challenges, due to the extreme diversity of the country's constituent ethnic groups. With 11 official languages, of markedly differing origins, developing instruments applicable to all groups is most challenging. Although this process is difficult, the necessity for cross-cultural research in the field of children's subjective well-being has become sufficiently pressing to warrant such endeavours. This process has been initiated by South Africa's involvement in the Children's Worlds: International Survey on Children's Well-Being ([isciweb.org](http://isciweb.org)), which is an inter-country collaborative study which aims to collect substantive data on children's subjective well-being. The current study is located within the Children's Worlds Survey and aimed to provide a preliminary structural validation of the PWI-SC.

### **Aims of the Study**

The overarching aim of the current study was to provide a preliminary structural validation of the PWI-SC. More specifically the study aimed to ascertain the extent to which the PWI-SC is an appropriate measure to use within the South African context. Within this process, the study aimed to test the fit statistics of the scale, as well as test the Afrikaans-translated version.

### **The context of children's well-being in South Africa**

After the fall of apartheid, the new South African government proceeded to enact a series of legislative advancements that aimed to ensure the well-being of the nation's youth. Following the precedent set by the South African Bill of Rights (1997), and more specifically subsection

28 thereof, wherein children are ensured all of their essential rights, the South African parliament passed the Children's Act (No. 38 of 2005), Children's Amendment Act (No. 41 of 2007), and Child Justice Act (No. 75 of 2008) in a concerted effort to shift government's focus onto the plight of South Africa's children, and provide a vehicle for their protection and upliftment. Overall, the various legislative and policy advancements have culminated in a fundamental change in the status of children within South African law. The official ratification of child rights has placed government as ultimately responsible for ensuring child well-being, and has elevated child welfare to a place of utmost importance in government policy. Reflecting this paradigmatic change, the Department of Women, Children and People with Disabilities (DWCPD) was created in 2009 with the charge of advocating child rights and welfare (as of 2014 the DWCPD has been replaced by the Department of Women) (Government Gazette, 2014). Despite the severe challenges faced, such institutional, legal, and policy advancements place child well-being at the forefront of the new South African government's social and political agenda (Savahl et al., 2014; Savahl et al., 2015).

In spite of the commendable legislative and institutional advancements made in the field of child welfare, the practical effects of these advancements have not filtered down to all the youth of South Africa. Sadly, many South African children are still exposed to circumstances that stand in stark contradiction to the ideals represented by the various children's statutes (Barbarin, 2003). Despite the prevalence of objective indicators of child well-being (e.g. mortality rates, education levels, HIV/AIDS incidence, etc.), the lack of subjective child well-being data is problematic, and is of great significance in understanding the many stressors operant on South African children, in an effort to alleviate them. The importance of further research into the well-being of children in South Africa is underscored by recent statistics of objective factors relating to child well-being, which paint a grim picture of the plight of South African children (Savahl et al., 2014; Savahl et al., 2015).

A recent example of such disconcerting statistical indicators is that of Mathews, Jamieson, Dawes, Lake and Smith's (2014) South African Child Gauge. According to these statistics, in 2012, 10.42 million of South Africa's 18.6 million children (i.e. 56% of the country's child population) live in impoverished conditions, subsisting off a family income not exceeding R635 per person per month (an income that places such children under the lower bound of the poverty line). In the Western Cape, 512 000 children (comprising 27.4% of the total child population) exist within this income bracket. These figures are particularly troubling,



especially given the association between income poverty and a variety of deleterious factors such as poor health, reduced educational opportunities, dangerous physical environments, and inferior healthcare services. The infant mortality rate is reported at 27 per 1000 live births, whilst the under-5 mortality rate is given at 41 per 1000 live births (Bradshaw, Dorrington, & Laubscher, 2014). By comparison, according to 2013 figures, the worldwide average infant mortality rate is 25.8 (with a median of 16.1), with an average under-5 mortality rate of 35.1 (The World Bank, n.d.a). Not surprisingly, given the preponderance of crime and violence in South Africa, criminal offences against children are also a matter of grave concern (United Nations Children's Fund [UNICEF], 2012). According to the records of the South African Police Services (2013), 42 822 children were the targets of violent crime in 2012, while 50 688 suffered violent crime in 2011, and 54 225 were victimised by violent crime in 2010. In the period from 1 April 2012 to 31 March 2013, murder constituted 1.5% of the total number of crimes towards children under 18, with attempted murder comprising another 1.5%, assault with intent of grievous bodily harm 21%, common assault 25%, and sexual offences 51% (South African Police Service, 2013). As can be seen from these statistics, the sexual abuse of children is the most frequent infringement of children's legal rights in South Africa. Disturbingly, research suggests that 29% of sexually abused children are under the age of 10, with 61% being under 15 years of age (UNICEF, 2009).

Despite the compelling nature of the statistics available on the state of South Africa's children, there are limitations to the types of conclusions that can be drawn from such objective statistical data. In an effort to remedy this limitation, the DWCPD attempted to develop an exhaustive set of indicators that cover the well-being of children more holistically. As such, the necessity for subjective indicators of child well-being, derived from the children themselves, is highlighted, alongside the more traditional objective indicators. This prioritisation of subjective indicators of well-being is consistent with the emphasis on the importance of such indicators in international literature.

## **Literature Review**

### **Child Well-being**

The current impetus behind the upsurge in research into children's subjective well-being (SWB) can be found in the adoption of the United Nations Convention on the Rights of the Child (United National General Assembly, 1989). However, more broadly speaking, the concept of children's SWB can be traced back to Jahoda's (1958) theory of ideal mental

health and, more recently, research into quality of life and happiness (see Casas, 1997; Cummins, 1995), standard of living and health, and work within the field of social psychology. Traditional conceptualisations of well-being focused on the absence of physical pathology (e.g. Moore, 1997), alongside the promotion of adaptive behaviours, and minimisation of maladaptive ones (e.g. Pollard & Rosenberg, 2003). Subsequent development has seen attempts to amalgamate these foci into a single theoretical model incorporating both prevention and treatment (the pathology focus), as well as the promotion of the positive, adaptive aspects of the individual (e.g. Pollard & Rosenberg, 2003). Despite the growing inter-disciplinary awareness in the field of well-being research, one broad distinction that emerges is between the health sciences' and social sciences' differing conceptions of well-being (Casas, Reese & Korbin, 2014). The health sciences' view of well-being is succinctly represented by the World Health Organization's definition of health as '*a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity*' (WHO, 1948, as cited in Conti & Heckman, 2012). Although this understanding has become increasingly influential within the social sciences, a largely indigenous understanding of well-being was fostered in the social sciences during the 1960s from the social indicators movement. The social indicators movement developed a conception of well-being derived from a wide variety of disciplines, but with a focus on measurement, and the potential for quantitatively evaluating and developing understandings of well-being through the use of a variety of social indicators (Ben-Arieh, Casas, Frønes & Korbin, 2014).

Another cause for the diversity in the conceptualisation of the construct of well-being may be traced, in part, to two disparate foci within the field of well-being research: that of the hedonic vs eudaimonic perspective (Ryan & Deci, 2001). The hedonic perspective emphasizes the subjective elements of well-being, and incorporates the concept of happiness, while affirming the importance of the avoidance of discomfort and the pursuit of pleasure. The psychological conception of hedonism differs from that of the traditional philosophical conception thereof, in that it encompasses both physical pleasure as well as more abstract positive life experiences such as goal attainment or personal fulfilment (Ryan & Deci, 2001). In contrast, the eudaimonic perspective regards well-being as a function of an individual's dynamic functioning within society, and incorporates a more existential outlook in its emphasis on meaning in life, life goals, and self-actualisation (Casas, 2011). Importantly, the eudaimonic perspective regards the satisfaction of needs, desires, or goal-attainment, as promoting well-being only in certain instances (Ryan & Deci, 2001). Thus, although pleasure

(and transitory happiness) may be attained from the satisfaction of certain desires, this need does not always equate to enhanced well-being. Rather, well-being is generated through the satisfaction of deeply-held values, and through the process of living authentically, according to one's true self. In this regard, it is possible that pursuing the satisfaction of more superficial desires can be detrimental to one's well-being, as such pursuits may distract one from, or be in conflict with, one's underlying nature.

In spite of the seeming clarity with which the perspectives of hedonic and eudaimonic well-being may be presented, a large degree of theoretical confusion has arisen concerning the two concepts, and how they relate to well-being overall. As can be seen by the above overview of the hedonic and eudaimonic perspectives in well-being research, the two constructs cover an extensive theoretical territory, and are difficult to precisely circumscribe. Reflecting this diversity, a multiplicity of differing theoretical conceptualisations and practical operationalisations of hedonia and eudaimonia have been proposed (Huta & Waterman, 2014). Central to developing an understanding of the distinctions present in this area is to acknowledge the lack of a single coherent framework for understanding the two concepts. While some studies have employed empirical methods for investigating these topics, with precise conceptualisations and operationalisations of the hedonic and eudaimonic perspectives, others have used the two terms loosely, in their more vague and general sense. As a result, knowledge in the area has developed in an uncoordinated manner. A recent attempt to bring a greater degree of order to the field was made by Huta and Waterman (2013), wherein they proposed a classification system for research into hedonia and eudaimonia. Based on three central pillars, namely (1) degree of centrality (i.e. conceptual proximity), (2) analytic category (orientations, behaviours, experiences, and functioning), and (3) measurement level (trait vs state), Huta and Waterman's (2014) taxonomical system holds promise for allowing clearer comparison between studies by organising them according to their respective conceptualisations of hedonia and eudaimonia. Such efforts appear acutely needed, and have especial relevance for further developing our understanding of overall subjective well-being, given the fundamental importance of the hedonic and eudaimonic perspectives within well-being research.

As evinced by the above overview of some of the broader distinctions and divergences within the research on well-being, current literature proposes a multi-dimensional appraisal of the concept (Land, Lamb & Mustillo, 2001; Pollard & Davidson, 2001; Pollard & Lee, 2003;

Thornton, 2001; Zaff, Smith, Rogers, Leavitt, Halle & Bornstein, 2003). The commendable work of Thornton (2001), and Pollard and Lee (2003), has discerned five constituent dimensions to the concept of well-being, based upon a thorough overview of available literature. These dimensions are: physical, psychological, cognitive and educational, social, and economic. Subsequent revisions have, in one prominent case, reduced these five dimensions to three (physical, socio-emotional, and cognitive) (Pollard and Davidson, 2001), while in another case increased the number to seven (material, health and safety, productive activity, place in community, education, social relationships, and emotional/spiritual) based upon Cummins (1995) quality of life research (Land et al., 2001).

Regardless of how one chooses to conceptualise well-being, and what one regards as constituting the construct's fundamental elements, it is plain when considering the aforementioned theoretical conceptualisations of well-being that the construct is best regarded as an overarching banner subsuming various theoretically distinct, but in practice often overlapping, concepts. Broadly speaking, well-being research has come to cover a range of constructs of various etymologies. Indeed, it is largely this etymological diversity of many of the constructs subsumed under the banner of well-being research that leads to the confusion and overlap between them. For example, the concept of happiness has become a staple part of the discourse on well-being, but draws its origins from philosophical debate dating back millennia. Similarly, quality of life is a term that has gained increasing recognition in well-being literature, though the modern usage of the term originated out of a growing sense of disillusionment with the technological advances of industrialised societies and their correspondingly increased levels of pollution and overpopulation in the 1970s (Armstrong & Caldwell, 2004). However, the very overlap between these two constructs can serve to complicate theoretical advances. One of the reasons for this hindrance lies in the fact that although there is increasing awareness between researchers in different fields, to a large degree separate fields still develop in isolation (Camfield & Skevington, 2008). In practice this means that concepts originating in one field develop without the input of progress of related concepts in another, leading to increasingly discipline-specific discourse regarding fundamentally related issues. Naturally, when knowledge of such independent origins comes together, a variety of distinct theoretical positions are created (especially in the dynamic and largely subjective field of well-being research) by proponents of the different traditions. Though the amalgamation of knowledge from previously separate disciplines should be viewed as a positive process facilitating the symbiotic development of both fields, in the case

of well-being research the closely overlapping nature of the various concepts being introduced has led to a divergence of opinions and theoretical argument regarding these constructs, and the construct of well-being in general.

Given this profusion of varied interpretations of the concept of well-being, as well as the complexity of the construct's hypothesized constituents, it is unsurprising that the concept of child well-being reflects a similar diversity and lack of consensus. Aked, Steuer, Lawlor, and Spratt (2009) hypothesize child well-being as a dynamic state existing as a function of 'the interaction between their external circumstances, inner resources and their capabilities and interactions with the world around them' (p.29). Perhaps more specifically, Pollard and Rosenberg (2003) write of child well-being as 'A state of successful performance throughout the life course integrating physical, cognitive, and socio-emotional function that results in productive activities deemed significant by one's cultural community, fulfilling social relationships, and the ability to transcend moderate psychosocial and environmental problems. (p. 14).

Of particular relevance to this study is the UNCRC, as it provides a basic set of standards that are endorsed by most governments worldwide. In spite of criticism regarding its alleged Western bias (Nieuwenhuys, 1998), the chief advantage of using the UNCRC as a basis for garnering insight into child well-being lies in its provision of a foundational normative framework. The UNCRC is thus often regarded as the progenitor of the child indicator movement and, coupled with the contributions of the 'new sociology of childhood', has been instrumental in propagating the acceptance of children as social actors who play a role in the production of knowledge (as opposed to simply being blind recipients of social inputs), thereby advancing the argument for dedicated child research and child-specific data. In practical terms, this shift in focus led to participatory research techniques in the child indicator movement, as well as a focus on the child as the unit of analysis (as opposed to the group, or adults' perceptions of children's well-being) and the beginnings of more rigorous investigations into SWB (Ben-Arieh, 2008). This focus on children's subjective perceptions has been convincingly reiterated by Casas, Bello, González, and Aligué (2013), who, reflecting on the International Survey on Children's Well-being (ISCWeb), advocate the perspective that such understandings are integral to the assessment and advancement of well-being and quality of life.

Given our nature as social creatures, and bearing in mind the tension between our ability to be autonomous and our place within a group, it has been compellingly argued that well-being has not only individual, but also social elements (Ben-Arieh, 2009). The incorporation of the idea of broader, social elements to well-being highlights the three basic motivations for the focus on child well-being (Fernandez, Mendes, & Teixeira, 2012). The first of these motivations is that the well-being of the children of today will have important implications for their future, and thus the future of society in general. Secondly, given the deplorable conditions in which many South African children live, the need for upliftment policies informed by compelling research is particularly acute. Lastly, the paucity of child-specific data necessitates the production of more research into child well-being.

### **Subjective Child Well-being**

Despite the dearth in child-specific data on well-being, there have been some developments in the field, particularly with reference to subjective child well-being. As evinced in the previous section, the concept of well-being is generally understood as incorporating both subjective and objective components. However, to ascertain the precise subject domain of subjective child well-being, and thereby come to a practical definition, is problematic (Camfield & Skevington, 2008; Tomyn & Cummins, 2011).

One of the reasons for this difficulty lies in the lack of conceptual clarity around the topic of SWB. This confusion manifests in the various overlapping constructs of quality of life, life satisfaction, happiness, and SWB. Indeed, it has been argued that the degree of overlap between the concepts of quality of life and SWB represents a superfluous tautology (Camfield & Skevington, 2008). However, research into the various concepts associated with SWB has been converging, despite the initial lack of awareness between researchers in different fields. The result of this increasing focus on SWB, as well as the varied interpretations that may be given to the concept, have resulted in the development of a large number of measures of SWB (with over 1000 instruments being readily identifiable) (Tomyn & Cummins, 2011).

The profusion of measures for SWB may nonetheless seem contradictory, given the lack of theoretical agreement within the field. However, one of the requirements for a valid conception of SWB is determining where the concept may differ cross-culturally, and where it remains constant (Camfield & Skevington, 2008). Given this emphasis on cross-cultural applicability, it is necessary to develop various measures in order to ascertain their practical

utility and, by extension, to determine as far as possible the validity of the specific theoretical bases from which the individual measures' conceptualisations of SWB are drawn.

Despite the challenges inherent in attempting to devise a cross-culturally applicable understanding of a concept as poorly circumscribed as SWB, insight into the related concepts of quality of life, life satisfaction, and happiness, can provide a useful theoretical base from which to view current perspectives on SWB. Although increasing attention has been given to SWB in recent literature, consensus regarding a precise operationalization of the construct remains elusive. In contrast with the lucidity with which objective concepts of well-being can be operationalised (e.g. concepts such as mortality rates, income, crime rates, etc.), in 2006 a group of experts in the field of well-being research came to a definition of SWB as 'An umbrella term for different valuations that people make regarding their lives, the events happening to them, their bodies and minds, and the circumstances in which they live' (Diener, 2006, p. 400). Although seemingly comprehensive, such a broad definition runs the risk of being excessively inclusive, making it difficult to practically define what exactly these 'valuations' are that should be regarded as constituting SWB. Further, given the requirement of cross-culturally applicable research, the likelihood of discrepancies in such understandings occurring cross-culturally provides an additional confounding factor to be addressed.

Of potential utility regarding ascertaining a more precise conceptualisation of SWB is research concerning the concept's potential subdivisions and correlates. Traditionally, life satisfaction has been viewed as a subsidiary concept to SWB, but has also been indicated as a component of quality of life (Camfield & Skevington, 2008). The World Health Organization's definition of quality of life takes into account the importance of context and value-systems, and contains the following six domains: physical health, psychological state, level of independence, social relationships, relationship to important features of the environment, and spirituality (WHO, 1997). As can be seen from the preceding definition, a great degree of overlap occurs between the concepts of quality of life and SWB. Nonetheless, Camfield and Skevington's (2008) contention that modern usage of the two concepts implies that they are synonymous does not appear to have yet significantly affected academic discourse on these topics. As such, SWB and quality of life are typically regarded as distinct, though overlapping concepts, despite being used interchangeably in some instances. Of significance in this regard is the fact that despite the increasing attention paid to subjective

factors in quality of life research, quality of life incorporates both objective and subjective domains, whereas SWB refers only to subjective components.

Another two related concepts frequently used in SWB research are happiness and life satisfaction. Despite being closely associated in the discourse, happiness and life satisfaction are distinct constructs (Huebner, 2004). In accordance with the multifarious uses and interpretations of quality of life and SWB, usage of the terms life satisfaction and happiness also varies. Nonetheless, in general, happiness refers to a more transitory affective state (although in some instances it is used synonymously with well-being, quality of life, or life satisfaction), whereas life satisfaction is intended to encompass a more global and enduring outlook. In both cases, SWB is a higher-order construct that subsumes both happiness and life satisfaction. As such, measures of SWB typically include items on life satisfaction and happiness (Huebner, 2004).

Given the emphasis placed upon gaining insight into children's subjective perceptions of well-being in current literature, the next step requires discriminating between the various measures available (all of which were developed outside of South Africa), and determining which are best suited to the South African context. A variety of measures are available, but, given the requirement of cross-cultural validity, the most relevant of these are the PWI-SC, SLSS, SWSS, and OLS.

The present study represents an attempt at developing a cross-culturally applicable measure of subjective child well-being.

### **Empirical Initiatives in Children's Subjective Well-being**

While conceptual and theoretical advances in the field of subjective well-being have been made, empirical initiatives into the state of children's SWB are more recent. The relatively recent nascency of such developments can partly be attributed to the need for clarification of the core constructs and domains of children's SWB for further investigation to proliferate, and partly due to the delay in accepting the importance of children's SWB by many official sources. Nonetheless, at present the field of children's SWB represents a diverse area, with a variety of empirical initiatives aimed at furthering our understanding of children and the realities that they inhabit.



One of the most esteemed of such initiatives is the Good Childhood Report (The Children's Society, 2014). The Good Childhood Report represents one of the few regularly updated reports on children's SWB. Aimed at investigating and summarising the state of children's SWB in the UK, the Good Childhood Report draws on a variety of sources. Specifically, the British Household Panel Survey (now incorporated into the Understanding Society survey), the Millennium Cohort Study, the Children's Worlds Survey, as well as quarterly surveys and periodic consultations by the Children's Society themselves, form the data sources for this report. The diversity and comprehensiveness of these sources result in the Good Childhood Report being one of the foremost empirical reports on children's SWB in the world.

One of the few initiatives that exceeds the Good Childhood Report in scope is that of the Children's Worlds Survey (Rees & Main, 2015). Involving 15 countries, with samples of 3000 or more children per country, the Children's Worlds International Survey of Children's Well-being assesses children's SWB across a variety of domains, using cross-culturally adapted instruments. The ability to engage in cross-cultural comparisons enabled by the survey is one of its chief contributions. However, the vast scope of the survey also reflects the rising prominence of the field of children's SWB both in and outside of academia, and the growing awareness of the importance of children's voices is one of the chief aims of the survey.

A large variety of empirical studies on children's SWB have been published, both as a part of larger projects such as those mentioned above, and independently. Partly foreshadowing the Children's Worlds survey, Bradshaw, Hoelscher, and Richardson (2007) published a comparative study of child well-being across 24 member states of the European Union, with a section dedicated to SWB. Subsequently, Bradshaw and Richardson (2009) extended this study to include 27 European states. Of particular relevance to the South African context is Bradshaw and Richardson's (2009) finding that child well-being was negatively correlated with inequality. Furthermore, the former Eastern bloc countries, which typically possess less developed economies and infrastructure, exhibited the lowest overall levels of child well-being and, specifically, of child SWB.

An interesting exploration of children's SWB was made in the Algerian context, by Tiliouine, Cummins, and Davern (2009). The effect of Islamic religiosity on children's SWB was investigated using the Islamic Religiosity Scale. Religiosity exhibited a strong positive

relationship with SWB, even in the face of health problems (despite the typically detrimental effect of health problems on SWB) (Diener & Chan, 2011; Tiliouine, Cummins, and Davern, 2009). Coupled with other research implicating the importance of religiosity in both children and adults' perceptions of well-being, these findings highlight both the complexity inherent in the construct of SWB, as well as the importance of incorporating local understandings of SWB in research. Goswami (2014) explored the construct of children's SWB by investigating the influence thereon of personality factors, in comparison to the conventionally cited demographic variables. By including personality variables (extraversion, agreeableness, conscientiousness, emotional stability, and openness) in a regression alongside demographic characteristics, the explanatory power of the model more than doubled ( $r^2 = 0.335$  [33.5%]), compared with a model which included only demographic variables ( $r^2 = 0.15$  [15%]).

Further underscoring the complexity of SWB, Savahl, Isaacs, Adams, Carels, and September (2013) investigated the effects of hope and exposure to community violence on children's SWB. Interestingly, although both hope and exposure to community violence exhibited significant correlations with SWB, hope was the stronger predictor, with exposure to community violence possessing only a weak negative correlation with children's SWB. In Savahl et al.'s (2013) study, a large proportion of the sample resided in a low income, impoverished community, where community violence is particularly prevalent. A study by Main (2014) sheds light on the significance of poverty in terms of children's SWB, by investigating the predictive power of poverty as measured by a child-derived index of material deprivation vs a minimum income qualification. Main (2014) found that the child-derived index provided greater predictive power than the minimum income qualification, and that the predictive power of this index was greatest in the SWB domains of family and choice. These findings stand in line with Cummins' (2000) contention that poverty and SWB possess a complex relationship, mediated by a variety of variables. Overall, the preceding studies clearly show the great diversity of variables that affect children's SWB. However, elucidating the nature of these relationships can be difficult, and often requires qualitative methods.

Fattore, Mason, and Watson (2009) investigated children's SWB using qualitative methods, and found that social relationships was the most prominent issue that children regarded as relevant to their SWB, though agency and control in various domains were also considered important, as well as safety and security. Goswami (2012) elaborated on the construct of children's SWB by further investigating the influence of social relationships thereon, and

found that children's relationships with their family and positive relationships with friends were the two largest contributors to their SWB, with other aspects of their social relationships providing supplementary explanation of variation in their SWB. Within the South African context, a study by Savahl et al. (2014) used focus groups to investigate children's subjective perceptions of their well-being. Personal safety, infrastructural deficiencies, and psychosocial functioning were identified as the most prominent themes influencing SWB from these focus groups. Part of the significance of these studies lies in their perspective on children as active subjects within the research process, as opposed to the objectification of children that has traditionally dominated child research. Fattore, Mason, and Watson (2012) reflect on the dominance of adult perspectives of childhood and well-being, even in many modern studies of children's SWB. They argue for the acknowledgement of children as the primary data sources (e.g. not to develop or adapt child SWB indicators based on adult conceptions of SWB), and to thereby use children's voices as the driving force behind the development of children's SWB indicators and further research in this field.

Other empirical research has focused on developing cross-culturally applicable measures of children's SWB. Casas, Tiliouine, & Figuer (2014) used the Personal Well-being Index and the Overall Life Satisfaction Scale, supplemented by several items focusing on specific domains of SWB, in order to assess the SWB of children in Algeria and Spain. Although direct comparison of mean scores was not supported by the study, correlation and regression comparison was supported, allowing for cross-cultural comparison of children's SWB between these two contexts. The importance of comparing children's SWB across different cultures has been convincingly argued by Casas and Rees (2015). Cross-cultural comparisons potentially allow for investigation into the mechanisms that underlie observed differences in SWB across cultures, and can provide elucidation of the factors associated with differing levels of SWB. Apart from the theoretical importance of such insights, the understanding of SWB thereby provided has important implications for government policy, as well as any of a diverse array of initiatives that seek to have a practical effect in encouraging well-being amongst the child population.

### **Scales used to measure children's subjective well-being**

Given the diversity of theoretical interpretations and operationalisations of the constructs of SWB, life satisfaction, happiness, and other overlapping or associated concepts, it is not surprising that a large number of quantitative measures for these constructs have been

developed. Recently, the validation and exploration of SWB measures has been given increasing attention, particularly for the purposes of cross-cultural instrument use.

Measures of SWB naturally reflect the constituent elements of the construct itself. SWB is typically understood to incorporate three essential components: life satisfaction, positive affect, and negative affect (one of the notable findings of SWB research is that positive and negative affect may exist simultaneously – thus they appear to be separate dimensions, instead of varying degrees of the same fundamental dimension). As a result, measures have been developed to assess these individual components, while others attempt to assess SWB overall. Another major distinction is between unidimensional vs multidimensional measures, which Proctor, Linley, and Maltby (2009) explore in their review of life satisfaction measures.

Proctor, Linley, and Maltby (2009) identified a total of eight scales, which they divided into the two broad groups of unidimensional and multidimensional, that assess children's life satisfaction. The unidimensional scales include the Students' Life Satisfaction Scale (SLSS), the Satisfaction With Life Scale (SWLS), the Perceived Life Satisfaction Scale (PLSS), and the Brief Multidimensional Student's Life Satisfaction Scale (BMSLSS), while the multidimensional scales include the Extended Satisfaction with Life Scale (ESWLS), the Multidimensional Student's Life Satisfaction Scale (MSLSS), the Multidimensional Students' Life Satisfaction Scale-Adolescent (MSLSS-A), and the Comprehensive Quality of Life Scale (ComQol).

The first of the unidimensional scales is that of the SLSS, which was developed to assess the global life satisfaction of children aged 8–18 years. Consisting of seven items on a four-point or six-point Likert scale for younger vs older samples respectively, the SLSS has demonstrated good reliability and validity in a variety of contexts (Proctor, Linley, & Maltby, 2009). The next unidimensional scale is the SWLS. Utilising five items on a seven-point Likert scale, one of the advantages of the SWLS is the fact that it has cut scores (Proctor, Linley, & Maltby, 2009). The SWLS has also been shown to exhibit good reliability and validity. Another unidimensional scale is the PLSS, with 19 items, and using a six-point Likert scale. However, the unidimensional nature of the scale has been called into question, and further research is recommended in this regard, as well as on what age range the scale can be used with. The last of the unidimensional scales reviewed by Proctor, Linley, and Maltby

(2009) is the BMSLSS. In spite of its title, the BMSLSS is a unidimensional scale, and consists of five items on a seven-point Likert style scale, each of which assesses a different life area (family, friends, school, self, and living environment). Intended for children between the ages of 8–18 years, the BMSLSS has shown good reliability and validity which, coupled with its comprehensiveness and brevity, makes it an attractive option for assessing children's life satisfaction. An additional scale should also be mentioned here (though not included in Proctor, Linley, and Maltby's [2009] review): the Overall Life Satisfaction Scale (OLS). Consisting of a single item measuring overall life satisfaction, the OLS represents an abstract and fundamental assessment of life satisfaction, and has been utilised for testing the convergent validity of other life satisfaction measures (Casas & Rees, 2015).

In contrast to the unidimensional scales discussed above, the ESWLS measures life satisfaction across nine domains, using 50 items and a seven-point Likert scale (Proctor, Linley, & Maltby, 2009). Although also used on adolescents, the psychometric properties of the scale are more thoroughly researched on adults, and further research is recommended in order to ascertain the scale's reliability and validity on adolescent samples. Another multidimensional instrument, the MSLSS, measures life satisfaction across five domains, using 40 Likert style items. Exhibiting good reliability and validity estimates for children aged 8–18 years, the MSLSS provides an assessment of both general and domain specific life satisfaction. An adapted version of the MSLSS, the MSLSS-A, has been adapted specifically for use with adolescent samples, and includes 53 items, with an extra domain on opposite-sex relationships. Although research on the psychometric properties of the scale is still in its early stages and is not yet conclusive, preliminary results shown good reliability and validity estimates. Lastly, the ComQuoL scale measures quality of life (a term overlapping, but not synonymous with, life satisfaction) on two dimensions, in seven domains. Using 35 items, the two dimensions represent objective and subjective assessments of the various domains, the latter of which is measured on both five-point and seven-point Likert-type scales. A version of the ComQoL was adapted for use with children aged 11–18 years. Although development on the ComQoL was abandoned in 2001, the subjective component of the scale has largely survived, forming the basis of the Personal Well-being Index-Adult.

The Personal Well-being Index is a measure of SWB, and thus includes components on both positive and negative affect, as well as life satisfaction. A version of the PWI has been developed for children (the Personal Well-being Index-School Children (PWI-SC)), which

consists of seven items, measured on an 11-point scale (Casas & Rees, 2015). Research on the psychometric properties of the PWI-SC has demonstrated good reliability and validity across a range of different contexts (see Casas et al., 2013; Jones, 2011; Lau, 2012; Tomy, Tyszkiewicz, & Cummins, 2011).

Apart from scales assessing SWB overall, and those evaluating life satisfaction, other measures have been developed to assess the affective components of SWB. One of the most prominent of such scales is the Positive and Negative Affect Scale for Children (PANAS-C) (Laurent, et al., 1999). Consisting of 27 items, rated on a five-point Likert scale, the PANAS-C has displayed acceptable reliability and validity estimates (Hughes & Kendall, 2009). Importantly, the PANAS-C conceptualises positive and negative affect as separate dimensions, in line with current studies on child SWB. Another scale designed to measure affect, is the Core Affect Scale (Russell, 2003). Consisting of six items, and measured on an 11-point scale using verbal anchors, Russell's Core Affect Scale (2003) allows researchers to incorporate the necessary affective evaluation into measures of subjective well-being, which many scales lack. Importantly, the Core Affect Scale breaks affect down into a fundamental dichotomous gradient lying between positive and negative.

### **Adaptation and Translation of Measuring Instruments in South Africa**

Adapting an assessment instrument for use in a different cultural context from which it was originally developed in is an arduous and time-consuming task. Apart from the multitude of questions that pertain to the format and content of the instrument itself, attempting to adapt the instrument for different language groups compounds the challenges faced still further. However, developing new measures can prove even more costly and, as such, given a lack of locally developed tests, adapting and translating a foreign, typically English-language test for use in another cultural context is often the most resource-efficient option (Widenfelt et al., 2005). Fortunately, given the necessity for cross-cultural study in contemporary research, a certain degree of consensus regarding how the challenges facing the adaptation of assessment instruments are to be addressed has been established.

Before commencing an exposition of the various impediments and solutions to cross-cultural test adaptation, a brief mention must be made of the two broad contexts in which such adaptation can take place (International Test Commission (ITC), 2010). The first of these contexts occurs when a pre-existing instrument is adapted for use in a setting different from

that in which it was originally devised. In this case, ensuring the psychometric equivalence of the original and adapted versions is typically essential. However, significant revision may be necessary, as disparate cultural groups may operationalise constructs in dramatically different ways. The second context encompasses the development of new instruments for use across a variety of different cultural settings. As a result, stringent adherence to preordained psychometric properties is not necessary. Furthermore, by operationalising the construct(s) of interest in terms of content domains common to all the cultures involved, the item pool generated should naturally reflect a common understanding of the topic. Thus, the problems inherent in adapting a potentially culturally biased instrument for use in a new setting are avoided. However, such test development requires extensive resources: in terms of the experts involved, the sample sizes necessary, and the time allocated.

Regardless of the nature of the adaptation process, there are a number of challenges that are typically confronted in the procedure. One of the most visible of such challenges is that of the differing ways in which various constructs may be expressed and understood by different cultures (Widenfelt et al., 2005). For example, cultural norms regarding emotional expression, morality, or psychopathology, may all impact upon how an instrument should be constructed or adapted. Thus, purely linguistic equivalence is insufficient for adequate translation, as conceptual equivalence may require culture-specific adaptation (Widenfelt et al., 2005). Of importance in this regard is noting that although some modification may be necessary to ensure equivalence of meaning for more descriptive items (e.g. those assessing presence of anxious behaviours), items assessing more abstract concepts (e.g. self-esteem) may need to be still more critically assessed, as it should not be taken for granted that such constructs are universal (Widenfelt et al., 2005). The appraisal of pathological behaviour in particular is subject to cultural influence, with cultural norms colouring what forms of behaviour are considered to fall within this sphere of functioning (Rubin, 1998).

Other issues impacting upon the validity of the adapted versions of a test may include response formats, time limits, administrator instructions, insufficient documentation of score interpretation, and a lack of sufficient statistical analysis of the translated instrument (Hambleton, 2001; ITC, 2010; Sireci, Yang, Harter, & Ehrlich, 2006). For example, multiple-choice item formats are used frequently for assessment purposes in the USA, while essay questions are less commonly posed. The opposite pattern is observed in South Africa, with the result that instruments exhibiting a preponderance of items of either of these formats

should be given careful consideration before they are applied within either context (Foxcroft & Roodt, 2009). In addition, the administrator(s) chosen, the manner in which instructions are given to respondents, and the manner in which scores are interpreted all need to be precisely understood before application of a test within a new context may yield valid results. Finally, statistical analysis of instruments is also necessary, and should focus on structural equivalence and differential item functioning (Sireci et al., 2006). Although evaluating all such considerations can be costly, it is necessary in order to ensure cross-cultural validity.

The issues propounded above make test adaptation in any context challenging. However, a number of unique considerations apply specifically within the South African context. One such consideration is that of the translation process involved when adapting English-language instruments for use with black South African ethnic groups (e.g. Xhosa, Zulu, Sotho, etc.). Given the vastly different context in which English and the black South African languages developed, finding equivalent terms can be difficult or impossible during translation. A related problem is the different understanding of particular constructs amongst black South African ethnic groups in comparison to white South African ethnic groups (e.g. the different value systems espoused by rural black South Africans vs urban English white South Africans). Indeed, even respected instruments such as the Big Five Inventory (based on Carl Roger's big five personality theory) (Cheung, Vijver, & Leong, 2011; De Fruyt, McCrae, Szirmák, & Nagy, 2004) should not be assumed to be valid for all South Africans, and the scores yielded by such a test in the South African context are unlikely to be comparable across cultural and language groups. Perhaps the most glaring of the challenges to test adaptation in the South African context is that of the frequent lack of funds necessary to properly implement the required procedures. Although these challenges make the prospect of test adaptation in South Africa appear bleak, an awareness of these issues allows for a sensitivity to them, which can assist in ameliorating their detrimental effects on the validity of adapted tests.

Another challenge to the process of test adaptation, and one that is particularly pertinent to South Africa's multilingual context, is the translation process involved. According to both the ITC (2010) and the World Health Organization (WHO) (n.d.), translation of an instrument into another language should follow a rigorous procedure. Specifically, three main phases are necessary (WHO, n.d.). The first of these phases is the translation of the original instrument into a new language by a single expert, who is familiar with the subject matter of the test, and



whose home language is the target language of the translation. Of importance here is the conceptual equivalence rather than the literal equivalence of the translation. The next phase is that of back translation by a panel of experts. Inadequacies in the translated version are discussed, and possibilities for alternatives are proposed. Back translation is then performed, and comparability of the original and back-translated versions may commence, which can inform further alterations. Once again, conceptual equivalence takes precedence over literal equivalence. Lastly, pre-testing and cognitive interviewing is required in order to garner an understanding of how respondents might apprehend the instrument. Although representative samples are not necessary for this phase, participants should include individuals from all backgrounds that the instrument is intended to assess. These three phases result in a final translated version of the instrument, (ideally) applicable in the chosen culture. However, strict adherence to the process outlined above is often not observed, in spite of its endorsement by various authorities (Widenfelt et al., 2005).

Amongst the most significant problems in developing or adapting tests for local contexts are the cost and time involved, as well as a potential lack of available experts. In developing nations, these problems are particularly acute, and can result in researchers using questionnaires that have not been properly evaluated or adapted for use in their cultural context (Bowden & Fox-Rushby, 2003). The seemingly general practice of refraining from sufficiently reporting on the translation and adaptation of instruments used compounds this problem further, and hampers discussion around the findings of such studies (Hambleton, 2001; Widenfelt et al., 2005). These problems echo the need for locally developed instruments with sound psychometric properties (Foxcroft & Roodt, 2009), and although research intended to address this issue is beginning to gain impetus, the lack of culturally appropriate measures in developing nations remains a pressing concern.

### **History of the Children's Worlds Project**

The International Survey on Children's Well-being (ISCWeb) started in 2009, with the meeting of a group of researchers in Geneva (Rees & Main, 2015). Spurred by the increasing acknowledgement of the necessity for research into children's subjective perceptions of their well-being, as well as the need for international and cross-culturally comparable data, the group produced a preliminary questionnaire intended to measure the SWB of children. After piloting the questionnaire in 2010, the group reconvened, and an amended second edition of the questionnaire was produced. After piloting the second edition of the questionnaire, a third

meeting was held, and a third edition of the questionnaire was produced based upon the outcomes of the last pilot. This third questionnaire was divided into the age groups of 8, 10 and 12 years, and was adapted for the South African context in 2012. The questionnaire was also piloted here, on a sample of 1004 12-year-old children, as part of wave one of the ISCWeb project. The current study forms a part of the First Wave of the project, which involves a large, representative sample of children from 21 countries.

### **Findings from the First Wave**

Findings from the first wave of ISCWeb project have already yielded useful results, most notably in terms of cross-national comparisons (Dinisman & Rees, 2014). For example, while eight of the eleven countries that participated in this wave showed that no more than 2.1% (South Africa) of their child participants were born in other countries, England, Israel, and Spain were notable exceptions, with 10.6%, 9%, and 11.2% of their participants having been born in foreign countries. Another interesting finding relates to the living arrangements in different countries. Brazil, England, Spain, and USA all indicated that more than 10% of their children lived in more than one home, while Brazil, Chile, England, the USA and Spain indicated a high proportion of children who lived with only one parent in their primary/only home (37.7%, 29.2%, 24.6%, 19.4%, and 36.5%, respectively). These figures are of particular interest in terms of family stability, as they seem to indicate differences in this regard across the nations involved in the survey. Despite these conspicuous differences, when asked questions about their satisfaction with various aspects of their home and family, participants' responses were more homogenous. A notable exception is Uganda, where considerably lower levels of satisfaction with home, the people you live with, other people in your family, and your family life were reported in comparison with other nations. Uganda also reported a notably higher proportion of children who felt unsafe at home, with South Africa and Algeria likewise showing a larger proportion of children who felt unsafe at home, though to a lesser degree than Uganda. Algeria and Uganda displayed the smallest percentage of children who felt that their friends were usually nice to them, with 69.7% and 50.5% respectively, in comparison with an average across countries of 80.2%. Furthermore, children in Uganda and South Korea showed the lowest satisfaction with their outdoor areas, as well as the areas they lived in in general. Children in Algeria, South Africa and Uganda displayed higher prevalence of loneliness than other countries, while South African and Ugandan children also disagreed the most about feeling positive about their futures.

Although the findings of the first wave of the project are evocative, comparison should only be made with caution, particularly in the case of mean comparison. While such analysis may provide some indication of the relative state of children's SWB, direct mean comparison has been criticised in previous research, and alternative methods of comparison have been advocated (e.g. regression comparison has demonstrated acceptable cross-cultural comparability, whereas mean comparison has not in some instances) (Casas, Tiliouine, & Figuer, 2014; Casas & Rees, 2015). Ideally, mean comparison should only be done with careful consideration of the underlying distributions from which the scores are drawn, as well as an understanding of possible cultural bias in terms of item response. However, this is rarely done, and simplistic interpretation of mean score difference can severely impair the validity of any conclusion drawn (Organisation for Economic Co-operation and Development (OECD), 2013).

### **Theoretical Framework**

The vagueness and lack of precision inherent in the construct of SWB lends itself to multiple theoretical interpretations. Bronfenbrenner's (1979, 1986, 1995, 2005) bio-ecological systems theory, Durayappah's (2010) 3P model, Cummins (2012) SWB homeostasis, and Minkkinen's (2013) structural model of child well-being, are the most prominent theories concerning SWB in the literature.

Bronfenbrenner's (1979, 1986, 1995, 2005) bio-ecological systems theory focuses on the interaction between children's intrinsic biologically-based characteristics and the environment (which is divided into five interacting levels) as the basis from which learning and development progress. The first of the interacting levels is that of the microsystem, incorporating interpersonal relationships and one's direct interactions with the environment, as well as the biological influences on one's behaviour. The next is the mesosystem, which involves interacting aspects of the microsystem. For example, a child's relationship with their parents and with their friends may interact (e.g. through the parent's perceptions – positive or negative – of the friends), and this interaction would fall under the domain of the mesosystem. The exosystem is the third level, and involves the effects of factors that the individual does not directly interact with, but which affect the individual through the medium of a factor that does directly interact with them. For example, a child's relationship with their father may become strained as a result of their father receiving a promotion at work which requires longer working hours or increased travel. The penultimate level is the macrosystem,

which incorporates the influence of broader cultural factors such as poverty, ideologies and values. Lastly, Bronfenbrenner modified his original theory to include a fifth-level system, namely the chronosystem, which incorporates the influence of the passage of time, and reflects the dynamic nature of human development. Thus, the chronosystem includes factors such as changing socio-historical circumstances (e.g. the end of apartheid in South Africa), as well as changing personal circumstances (e.g. as a result of divorce). Each system becomes increasingly remote from the individual, but nonetheless affects their development. Of particular significance is bio-ecological systems theory's focus on the reciprocal relationship of the individual to the systems involved in development. As such, a degree of agency is implicitly allotted to the child (or adult, as bio-ecological systems theory covers the entire lifespan), which is consistent with the underlying philosophy of modern well-being research in regarding children as relevant social actors.

In contrast to bio-ecological systems theory, Durayappah's (2010) 3P model regards present, past and prospect (future) as interacting states which determine, with the mediation of certain individual biases, overall SWB. The importance of different temporal states (past, present and prospect) in determining SWB is underscored by the fact that although we can only directly experience the present, our experience of it is influenced by past events and anticipations of the future, all of which are interlinked. For example, thinking about a pleasurable meal one has had can bring pleasure in the present, while anticipating an enjoyable road trip can similarly increase one's sense of well-being. However, one's sense of SWB varies between the different temporal states. As a result, Durayappah hypothesizes channels between the three temporal states, constituted by cognitive biases which impede continuity of SWB between them. In addition to these cognitive biases that mediate SWB between temporal states, there also exist meta-biases, which represent a form of bias that permeates all states (e.g. personality factors such as extraversion and neuroticism), and affects SWB. One important component of these meta-biases is that of one's temporal perspective, which is defined in three ways. A temporal perspective refers to a predisposition (1) to cognitively 'spend time' in the past, present, or prospect; (2) to view the past, present, or prospect positively or negatively; (3) and to weight the perceived utility of each state differently (in terms of how it affects their levels of SWB (e.g. remembering might be given more weight than anticipation, or *vice versa*). Durayappah's 3P model is continuous in the sense that it is cyclical. That is, SWB flows from one temporal state to another with the mediation of one's cognitive and meta-biases. The 3P model is an attractive one in child SWB research due to

the fact that it provides a parsimonious model of SWB that has also been applied to child development.

The next theory of SWB to be considered is that of Cummins' (1995, 1998, 2000, 2003, 2010, 2012) influential homeostasis theory. In this theory, Cummins explains the relative lack of variation in individuals' ratings of their own SWB despite varied ratings of OWB in terms of an intrinsic regulatory mechanism that activates protective buffers in response to potentially deleterious (and, in some cases, beneficial) external influences. According to homeostasis theory, there is a set SWB level (which is typically mildly positive), based upon one's personality, from which external events may cause deviations. This set level of SWB is referred to as homeostatically protected mood (HP mood). Deviations from this set-point are only temporary, and SWB levels naturally return to the set-point over time. As a result, SWB levels usually remain within a range around this set-point. In conjunction with personality, a set of cognitive buffers involving perceived control, self-esteem and optimism, underlies this process by mediating the effects of different need states imposed by external events on SWB levels. Satisfied needs provide reinforcement for the buffering system, while in normal cases unsatisfied needs provide motivation. The last set of processes operant are those of habituation and adaptation, which provide a more elementary defence against the possibility of external events effecting significant alterations in the homeostatic system. However, in cases where the external event is of a sufficiently extreme nature or quantity, homeostatic defeat may occur, in which the homeostatic system is no longer effective. Following such an event, SWB levels become primarily dependent on the external event, instead of the intrinsic regulatory mechanism.

The structural model of child well-being (Minkkinen, 2013) draws from a diverse theoretical base, and focuses on children as social actors, and their interaction with the socio-cultural environment on multiple levels. Minkkinen refers to dimensions of well-being, consisting of physical, mental, social and material elements, and an overall frame of well-being, which consists of the categories of subjective action, a circle of care, the structures of society, and culture. The various dimensions of well-being attempt to capture the accepted multidimensional nature of the construct of well-being in current literature, and thus relate directly to the child in a manner similar to previous conceptualisations of well-being. However, the structural model of child well-being provides the innovative addition of incorporating frames of well-being, which refer to broader states, and allow the child a degree

of agency (as opposed to simply looking at well-being and its dimensions as an isolated property that children possess). Subjective action refers to both internal and external actions that the child undertakes which moderate SWB levels. The frame of subjective action plays a mediating role between the dimensions of well-being and the societal frame of well-being (consisting of, in increasing distance from the child, the circle of care, the structures of society, and culture), thus implying that a child can modify the societal impact on their well-being through their own agency. The societal frame of well-being is somewhat analogous to Bronfenbrenner's ecological levels of micro-, meso- and macrosystem, but differs in terms of its operationalisations of core concepts, and Minkkinen's adoption of a mediating circle of subjective action between these circles and the child.

### **Goodness of Fit: Theory of Fit Statistics**

The current study uses the theory of fit indices (also known as goodness of fit), as this allows one to ascertain whether a model is acceptable and able to reproduce data. To this end, confirmatory factor analysis (CFA) was used, as it involves the generation of fit statistics. The efficacy of CFA in this regard (for the generation of fit indices) has been increasingly recognized, with the use of CFA and related methods becoming considerably more prominent in psychological research since the mid-1990s (Jackson, Gillaspay, & Purc-Stevenson, 2009). CFA is of particular relevance as it involves testing 'a priori hypotheses about relations between observed variables (e.g., test scores or ratings) and latent variables or factors' (Jackson et al., 2009, p. 6). Essentially, this means testing measurements (e.g. a high score on a scale for depression – the manifest variable) against the variables that they are meant to measure (e.g. actual depression – the latent variable). The theory of fit indices thus involves the testing of items against the constructs that they are meant to measure, using any of several accepted fit indices (statistical tools of analysis that are accepted as representing degree of fit between observed score and actual score). Following Jacard and Wan's (1996) recommendation, multiple fit indices were used. In accordance with Kline (2010), the specific fit indices used were the comparative fit index (CFI), root mean square error of approximation (RMSEA), standardised root mean square residual (SRMR), and the chi-squared test; this is in an effort to determine if a good fitting model exists, as this allows one to determine if causal paths are significant, and enables examination of potential discrepancies between variables.

## Method

The study falls under First Wave of the ISCWeb project, and follows a cross-sectional survey design. Furthermore, although the International Project included three age groups (8, 10, 12 years), the South African study only includes the 12-year-old age group, with a sample size of 1004. A total of 15 countries participated in the First Wave.

### Research Context

A legacy of poverty and economic inequality are unsettling realities of contemporary South African society. Indeed, with a Gini co-efficient of .65 (World Bank, n.d.b), South Africa has attained the dubious distinction of possessing one of the greatest disparities in wealth of any country in the world. Underscoring the importance of these facts is extensive research that implicates inequality in wealth as one of the best predictors of violence and dissatisfaction in a country (Neapolitan, 1999; Bircan, Bruck, & Vothknecht, 2010). These inequalities manifest in stark contrasts between geographically separated communities, despite the close proximity of these communities to each other. The high socio-economic communities typically possess high levels of education, income and employment, and correspondingly low levels of crime and violence, while low socio-economic communities frequently exhibit low levels of education and occupational advancement, and consonantly higher levels of crime, violence and unemployment.

The current study was administered in the Western Cape Metropole. This area represents an urban environment typical to South Africa, and comprises approximately 5.8 million inhabitants. Participants for the study were selected from low- and middle-income areas.

### Sampling

Two-stage stratified random sampling was used to select child participants from the four Education Management District Councils (EMDCs) of the Western Cape Education Department (WCED) Metropole. This method ensured a comprehensive selection of children from various cultural, income and geographical groupings. The first stage involved stratification of the schools by their location within the EMDCs. Thereafter, schools were stratified by income level (middle or low income) and randomly selected from these criteria. Despite the intent to ensure an equal number of low- and middle-income schools in the final sample, ultimately the sample consisted of eight low-income schools and seven middle-

income schools. All 12-year-old children in the schools were selected for participation, which resulted in a total of 1048 participants from the 15 schools. This total was reduced to 1004 participants following data cleaning, in which damaged or incomplete questionnaires were discarded. Of this final sample, 58.6% were from the low-income group, 41.4% were from the middle-income group, 53.9% were girls, and 46.1% were boys.

### **Instrumentation**

Although the instruments developed for use internationally were written in Spanish and English, use of the questionnaire in the South African context required adaptation. This necessitated cognitive testing of the questionnaire, as well as translation into Afrikaans, and the piloting of the 12-year-old questionnaire. Cognitive testing involved the purposive selection of two groups of 10 children each from primary schools within the sampling frame, in order to create two focus groups. The primary schools were selected from the sample conveniently. The input from these focus groups assisted in the adaptation of questionnaire items in terms of phrasing, refining, and modification. Afrikaans translation of the questionnaire followed thereafter, via the backward translation method. The next step involved piloting both English and Afrikaans questionnaires on a randomly selected sample (consisting of 100 12-year-old children from both low- and middle-income schools). Particular attention was paid to gaining information regarding the children's responses to the questionnaire, especially the ordering of items and overall questionnaire length. The data yielded by the pilot informed the further revision and finalisation of the questionnaire. This resulted in a final 14-page questionnaire comprising components on SWB perceptions focused on life satisfaction, personal well-being, hope, and a section on daily activities and societal participation. This diversity entailed the inclusion of several internationally validated scales. Specifically, the Student Life Satisfaction Scale (SLSS) (Huebner, 1991), the Personal Well-being Index – School Children (PWI-SC) (Cummins & Lau, 2005), the single-item scale on Overall Life Satisfaction (OLS) (Cummins & Lau, 2005), and the Children's Hope Scale (Snyder et al., 1997).

### **Personal Well-being Index – School Children and Adolescents**

The PWI-SC is the child-version of the Personal Well-being Index – Adult, and is similarly designed to measure SWB. Domains included are: standard of living, health, achieving in life, relationships, safety, community-connectedness and future security. The PWI-SC contains one item per domain, and is meant to exhibit a 'first level deconstruction of satisfaction with



“life as a whole” ’ (Tomy & Cummins, 2011, p.408). For the purposes of the current study, an additional item on school experience was included. All items used a 10-point response scale, with 0 indicating complete dissatisfaction and 10 indicating complete satisfaction. The final result was a composite variable generated by the mean score for all the items. Furthermore, with an alpha coefficient of 0.82 (Tomy & Cummins, 2011), the PWI-SC displayed acceptable internal consistency. Following the recommendations of Casas et al. (2012), the PWI-SC was converted into a 100-point scale to aid in comparison between the various scales incorporated in the questionnaire.

Previous research on the PWI has demonstrated good cross-cultural validity for the scale in various contexts, which is an encouraging fact for the testing of the scale in South Africa. In one study, the equivalence of the adult and child versions of the PWI was tested on an Australian sample, with the results strongly indicating that the two scales assess the same underlying constructs (Tomy, Tyszkiewicz, & Cummins, 2011). This equivalence between the adult and child versions is most important for meaningful comparisons to be made between scores, and is useful in the development of theory concerning SWB and quality of life, as it potentially allows for greater longitudinal associations to be drawn. Perhaps of more direct relevance to the current study is existing research on the cross-cultural validity of the PWI-SC. Casas et al. (2013) demonstrated the validity of the PWI-SC for the Spanish context, given the modification of the scale to suit local conditions. Evidence for the validity of the scale was garnered from CFA, and comparison with other SWB scales, in which high reliability and convergent validity were demonstrated. Similar results have been found for the PWI-SC in contexts as diverse as Cote d'Ivoire (Jones, 2011) and China (Lau, 2012). The Afrikaans-translated version of the PWI-SC is presented below.

## **The Afrikaans Translated Personal Well-Being Index – School Children**

1. Hoe gelukkig is jy met alles in jou lewe?

### **Hoe gelukkig is jy met elk van die volgende dinge in jou lewe:**

1. met al die dinge (besittings) wat jy het?
2. met jou gesondheid?
3. met die dinge wat jy goed wil doen?
4. met jou verhoudings met mense wat jy ken?
5. met hoe veilig jy voel?
6. met dinge te doen weg van jou huis?
7. oor wat kan later met jou gebeur in jou lewe?
8. met jou lewe as n leerder?

### **Data Collection**

Questionnaire administration was conducted in collaboration with the classroom teachers according to a predetermined researcher-administered protocol. This entailed the reading of questionnaire items to participants by a member of the research team, while participants answered the questionnaire. This was regarded as of assistance to those participants who might have difficulty completing the questionnaire, and is a procedure typically employed with young subjects or vulnerable groups. Questionnaires took approximately 30 minutes to complete.

### **Procedure and Ethics**

Ethics clearance for the current study was granted by the UWC Senate Research Ethics Committee, and Western Cape Education Department (WCED). Once clearance was obtained, the researchers contacted the schools in accordance with the sampling procedure outlined above. The first step taken after selection of schools from the sampling frame was to meet with principals and life skills teachers of the selected schools. The 12-year-old schoolchildren were informed as to the aim, nature of their involvement, and ethics of the study, in an information session. Their right to withdraw at any time was explained, as well as their rights of confidentiality and privacy. Signed consent forms from both parents and children who agreed to participate were obtained. Non-return of consent forms precluded participation in the study. Participants were also informed that counselling was available should they request it. The questionnaire was administered by the core group of researchers to

the children during an administration period at the beginning of the school day. The completion time of the questionnaire was approximately 30 minutes.

### **Data Analysis**

Data analysis was performed using the Statistical Package for the Social Sciences (version 22). Descriptive statistics such as means, standard deviations, frequency distributions and cross-tabulations were generated.

Before commencing the generation of descriptive statistics, confirmatory factor analysis (CFA) was used to test the fit indices of the measures (using AMOS, version 22). This was done to determine the appropriateness of the measures for the South African context.

In accordance with the recommendations of Casas et al. (2013), the data of any participants with more than two missing values were deleted, and substitute values were generated by regression. Maximum likelihood estimation was utilised with kurtosis and departures from normality attended to using the bootstrap method.

Comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardised root mean square residual (SRMR) were used as fit indexes. In accordance with Hu and Bentler (1999), results higher than 0.950 were accepted for CFI and results below 0.05 were regarded as a good fit for RMSEA and SRMR.

For comparison of CFA between groups, factor invariance is critical. Factor invariance is a measurement of the degree of similarity in meaning for items between different groups, and is a requirement for factor comparison. If it is not observed, means or correlation coefficients may be attributed to real distribution differences or to different meanings of the variables (Meredith, 1993). Three types of factor invariance were considered. Firstly, configural invariance was tested by means of an unconstrained multigroup model. Secondly, metric factor invariance, which is required for the comparison of variances, covariance or regression coefficients was tested by constraining the factor loadings. Thirdly, scalar factor invariance, which is required for comparison of means between groups (Casas & Rees, 2015) was tested by constraining the loadings and intercepts.

## Results

### Descriptive Statistics

Skewness of the items ranged from -.901 to -2.145 for the PWI-SC; with kurtosis from -.226 to 4.728, and Cronbach's Alpha of .68. A means analysis showed significant overall mean scores across SES groups for the PWI-SC. Table 1 presents the mean scores per item and the mean composite score (converted to a 100-point scale) for the PWI-SC.

**Table 1: Item means and composite for the PWI-SC.**

	<i>N</i>	<b>Mean</b>	<b>Std Deviation</b>
Satisfied with things I have	1004	8.58	2.18
Satisfied with relationships in general	1004	8.17	2.36
Satisfied with school experience	1004	8.34	2.23
Satisfied with health	1004	8.76	2.10
Satisfied with safety	1004	8.39	2.38
Satisfied with things I'm good at	1004	8.73	2.06
Satisfied with things away from home	1004	6.93	3.14
Satisfied with future security	1004	7.62	2.88
PWI-SC composite	1004	81.90	13.60

### Confirmatory Factor Analysis

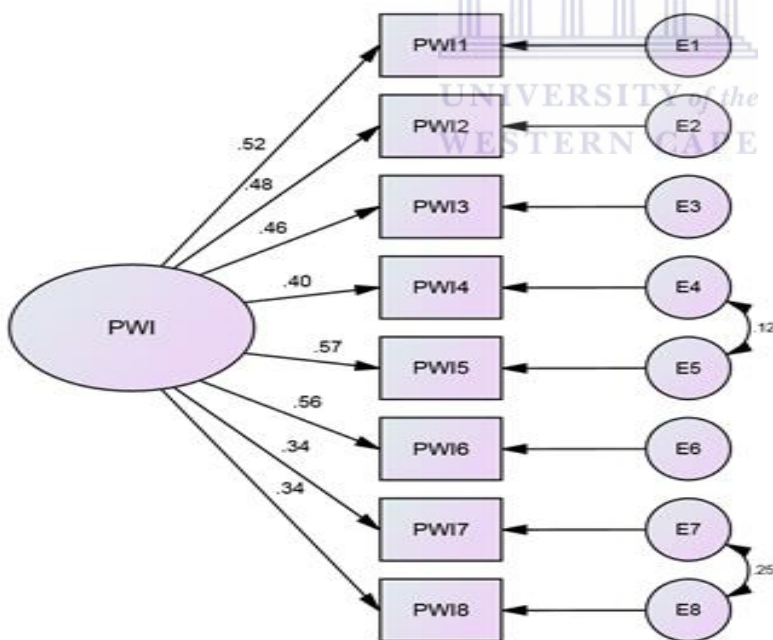
In order to assess the validity of the factorial structure of the scales, confirmatory factor analysis was used to test the fit statistics of various models (presented in Table 3). Initial models for the PWI-SC did not show adequate fit. However, modified models with two error co-variances (item 4 to item 5; item 7 to item 8) for the PWI-SC produced an adequate fit in accordance with the prescribed threshold values. Standardised factor loadings for the scale ranged from 0.34 to 0.57 (presented in table 2). Although the last two items (see Table 2) exhibit relatively low factor loadings (.340 and .339), these are within the acceptable range (>0.2, Bynre, 2011). As such, factor loadings for the scale are acceptable.

**Table 2: Standardized Regression Weights: (Group number 1 - Default model).**

Parameter		Estimate	Lower	Upper	<i>p</i>
SatisfiedThingsHave	<--- PWI	.525	.452	.604	.004
SatisfiedRelationshipsGeneral	<--- PWI	.483	.402	.558	.004
SatisfiedSchoolExperience	<--- PWI	.458	.365	.533	.004
SatisfiedHealth	<--- PWI	.401	.314	.495	.004
SatisfiedSafety	<--- PWI	.569	.490	.646	.004
SatisfiedThingsGoodAt	<--- PWI	.557	.477	.626	.004
SatisfiedThingsAwayFromHome	<--- PWI	.340	.274	.411	.004
SatisfiedLaterInLife	<--- PWI	.339	.258	.424	.004

Figure 1, presented below, provides a diagrammatic overview of the proposed model. Although items four and five, and seven and eight, display covariance of errors, the covariance is of acceptably low levels (.12 and .25, respectively). Furthermore, the improvement to model fit made by the inclusion of the two error co-variances is considerable, and justifies the proposed modified model (model 2 – see table 3).

**Figure 1: Modified model with two error co-variances.**



**Table 3: Fit indexes for the pooled (Models 1 – 2) and multi-group data (Models 3 – 5).**

Model	$\chi^2$	df	<i>p</i> -value	CFI	RMSEA	SRMR
1 PWI-SC initial model	124.09	20	0.00	0.890	0.072 (0.060 – 0.084)	0.048
2 PWI-SC modified model with 2 error co-variances	53.01	18	0.00	0.963	0.044 (0.031 – 0.058)	0.029
3 PWI-SC unconstrained	83.48	36	0.00	0.951	0.036 (0.026-0.047)	0.030
4 PWI-SC constrained factor loadings	88.84	43	0.00	0.953	0.033 (0.023-0.042)	0.031
5 PWI-SC constrained factor loadings and intercepts	103.08	50	0.00	0.945	0.033 (0.024-0.041)	0.031

To compare coefficients across language groups, factor invariance was tested in three steps. In the first step, configural invariance was tested using an unconstrained multi-group model (model 3 in Table 3). As the unconstrained model showed adequate fit, the next step consisted of testing metric factor invariance by constraining the factor loadings (model 4 in Table 3). The model did not display significantly worse fit than the third model – fit indices did not worsen by more than 0.01 (Cheung & Rensvold, 2002), and as such, metric factor invariance was tenable. Therefore, the two language groups can be compared by regressions and correlations. Lastly, scalar factor invariance was tested (model 5 in table 3) by constraining the factor loadings and intercepts. The resultant model did not show significantly worse fit than the preceding model (model 4). As scalar factor invariance was tenable, the two language groups can be compared by regression, correlations, and means. Table 4 indicates that the mean difference between groups was not significant ( $p > .05$ ).

**Table 4: Mean differences: English-Afrikaans.**

Parameter	Estimate	Lower	Upper	<i>p</i> -value
PWI	.161	.045	.375	.148

## Discussion

Despite the severe adversities faced by so many children in South Africa, a cursory reading of scores of the PWI-SC seems to indicate surprisingly high levels of subjective well-being. However, direct interpretation of mean scores is most questionable in the field of children’s subjective well-being, especially given the lack of normative scores, as has been attested to in numerous studies (Casas & Rees, 2015; Casas, Tiliouine, & Figuer, 2014; OECD, 2013;

Savahl et al., 2015). Specifically, subjective well-being data exhibits a tendency towards being negatively skewed, resulting in data that display an unrealistically positive evaluation of well-being. This tendency becomes most conspicuous when such scores are compared with objective indicators of well-being, which often suggest far lower levels of overall well-being, especially in developing nations such as South Africa. Despite this complication, validation of measures of subjective well-being is a necessity, particularly given the dire conditions that many objective indicators suggest. Within the child indicator movement, studies generally report composite mean scores that have been transformed into 100-point scales. Using this procedure, Casas et al (2013) report mean composite scores of between 70 and 80 for child populations of western countries on the Personal Well-Being Index. In the current study, a transformed composite mean score of 81.90 was found.

The analysis of the fit structure of the PWI-SC indicates appropriate fit structure for the pooled data, provided two error co-variances are included in the model. Despite the low factor loadings of items seven and eight, the factor loadings are still acceptable, and coupled with the theoretical importance of these items (which are required for the PWI-SC to comprehensively tap the various domains of children's subjective well-being), justifies their inclusion. Furthermore, multi-group analysis indicated that the Afrikaans-translated version of the PWI-SC provided a valid reading of subjective well-being in comparison with the English version. Specifically, regressions, correlations and mean scores were comparable across language groups.

The importance of ensuring the validity of measures of subjective well-being between different language groups is underscored by the divisive socio-political history of South Africa. English and Afrikaans are the only two languages of European descent widely spoken in South Africa. However, although English is the home language almost exclusively of whites, Afrikaans is the mother tongue of a large proportion of whites, as well as the majority of the coloured population. This diversity in terms of the ethnic constituents of the Afrikaans-speaking population group compounds the challenges involved in validating measures on them, due to the segregated development of the different constituents of this group, and the selective oppression of coloured and black people in South Africa's past. Given the oppression of the predominantly Afrikaans-speaking coloured subset of the South African population by the apartheid government, as well as the separate development of, and

concordantly limited interaction between, white and coloured population groups, the use of measures validated on one population group should not be assumed to be universally valid. It is perhaps encouraging to note that the adapted version of the PWI-SC displays comparable functioning on both English and Afrikaans children within the Western Cape, in spite of the complexity inherent in the social structure of contemporary South Africa.

Overall, analysis of the fit structure of both the pooled and multi-group data indicates acceptable fit structure for the proposed modified model, while analysis of the multi-group models (testing for metric and scalar factor invariance) indicates that regressions, correlations and mean scores can be compared across English and Afrikaans population groups in the Western Cape. Given these results, use of both the English and Afrikaans PWI-SC on children within the Western Cape can be recommended.

## **Conclusion and Recommendations**

In spite of recent initiatives aimed at increasing our understanding of children's subjective perceptions of their own well-being, within South Africa, such efforts are still in their infancy. The current study represents an attempt at furthering this burgeoning field within South Africa, by providing validation of an internationally developed instrument for use on English and Afrikaans population groups in this country. Despite the promising results of the study, further research into developing locally valid measures of subjective well-being is necessary.

Future studies could test the appropriateness of translated versions of the PWI-SC and other measures of subjective well-being on other population groups in South Africa. Although the diversity of such ethnic groups within South Africa may make this task difficult, it is worth noting that there is a great deal of linguistic and cultural similarity between many of South Africa's different ethnic groups, which may ease this task, and allows for some degree of optimism in terms of the validation of measures of subjective well-being. Furthermore, the diversity of ethnic groups in South Africa may also prove beneficial to the field of children's subjective well-being, by allowing analysis of the differing constructions of well-being amongst such a diverse African sample (although research into subjective well-being has not entirely precluded African involvement, the majority of studies have been conducted in developed countries). As such, progress of the field of children's subjective well-being in



South Africa will require both exploratory qualitative studies, as well as quantitative efforts initially aimed at furthering the development of measures for use in South Africa.



## References

Aked, J., Steuer, N., Lawlor, E. & Spratt, S. (2009). *Backing the future: Why investing in children is good for us all*. London: New Economics Foundation.

Armstrong, D., & Caldwell, D. (2004). Origins of the Concept of Quality of Life in Health Care: A Rhetorical Solution to a Political Problem. *Social Theory & Health*, 2, 361-371.

Barbarin, O. A. (2003). Social risks and development in South Africa: a nation's program to protect the human rights of children. *American Journal of Orthopsychiatry*, 73(3), 248-254.

Ben-Arieh, A. (2008).The Influence of Social Indicators Data on Decision Making in Regard to Children's Well-Being. *Administration in Social Research*, 32(1), 23-38.

Ben-Arieh, A. (2009) "From child welfare to children's well-being: The child indicators perspective". In Kamerman, S.B., Phipps, S., & Ben-Arieh, A. (Eds), *From child welfare to children's well-being: an international perspective on knowledge in the service of making policy*. Dordrecht: Springer.

Ben-Arieh, A., Casas, F., Frønes I., & Korbin, J. E. (2014).Multifaceted Concept of Child Well-being. In A. Ben-Arieh, F. Casas, I. Frønes, & J. E. Korbin (Eds.), *Handbook of Child Well-Being*, (pp. 1-27). Dordrecht: Springer.

Bircan, C., Bruck, T., & Vothknecht, M. (2010).Violent conflict and inequality. *German Institute for Economic Research, Discussion Paper 1013*.

Bosch, A., Rossouw, J., Claassens, T., & du Plessis, B. (2010). A Second look at measuring inequality in South Africa: A modified Gini coefficient. *School of Development Studies, Working Paper 58*.

Bowden, A., & Fox-Rushby, J. A. (2003). A systematic and critical review of the process of translation and adaptation of generic health-related quality of life measures in Africa, Asia, Eastern Europe, the Middle East, South America. *Social Science & Medicine*, 57, 1289-1306.

Bradshaw, D., Dorrington, R. E., & Laubscher, R. (2014). Rapid Mortality Surveillance Report 2012. Cape Town: Medical Research Council.

Bradshaw, J., Hoelscher, P., & Richardson, D. (2007). An Index of Child Well-being in European Union. *Social Indicators Research*, 80(1), 133-177.

Bradshaw, J., & Richardson, D. (2009). An Index of Child Well-being in Europe. *Child Indicators Research*, 2(3), 319-351.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments in nature and design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723-742.

Bronfenbrenner, U. (1995). Developmental ecology through space and time: A future perspective. In P. Moen, G. H. Elder, Jr., K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 619-647). Washington, DC: American Psychological Association.

Bronfenbrenner, U. (2005). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3-15). Thousand Oaks, CA: Sage. (Original work published 2001)

Camfield, L., & Skevington, S. M. (2008). On Subjective Wellbeing and Quality of Life. *Journal of Health Psychology*, 13(6), 764-775.

Casas, F. (1997). Children's rights and children's quality of life: conceptual and practical issues. *Social Indicators Research*, 42(3), 283-298.

Casas, F. (2011). Subjective social indicators and child and adolescent well-being. *Child Indicators Research*, 4(4), 555–575.

Casas, F., Bello, A., Gonzalez, M., & Aligué, M. (2012). Personal Well-Being among Spanish Adolescents. *Journal of Social Research & Policy*, 3(2), 19-45.

Casas, F., Bello, A. González, M. & Aligué, M. (2013). Children's subjective well-being measured using a composite index: What impacts Spanish first-year secondary education students' subjective well-being? *Child Indicators Research*, 6(3), 433-460.

Casas, F., & Rees, G. (2015). Measures of Children's Subjective Well-Being: Analysis of the Potential for Cross-National Comparison. *Child Indicators Research*, 8(1), 49-69.

Casas, F., Tiliouine, H., & Figuer, C. (2014). The Subjective Well-being of Adolescents from Two Different Cultures: Applying Three Versions of the PWI in Algeria and Spain. *Social Indicators Research*, 115(2), 637-651.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating Goodness-of-Fit Indexes for Testing Measurement Invariance. *Structural Equation Modeling*, 9(2), 233-255.

Cheung, F. M., Vijver, F. J. R., & Leong, F. T. L. (2011). Toward a new approach to the study of personality in culture. *American Psychologist*, 66(7), 593-603.

Conti, G. & Heckman, J. J. (2012). *The economics of child well-being*. IZA Discussion Paper No. 6930. Available at SSRN: <http://ssrn.com/abstract=2164659>

Cummins, R.A. (1995). *The comprehensive quality of life scale: Theory and development: Health outcomes and quality of life measurement*: Canberra: Institute of Health and Welfare.

Cummins, R. A. (1998). The second approximation to an international standard for life satisfaction. *Social Indicators Research*, 43(3), 307-334.

Cummins, R. A. (2000). Personal income and subjective well-being: A review. *Journal of Happiness Studies*, 1(2), 133-158.

Cummins, R. A. (2003). Normative life satisfaction: Measurement issues and a homeostatic model. *Social Indicators Research*, 64(2), 225-256.

Cummins, R. & Lau, A. (2005). *Personal Well-Being Index – School Children (PWI-SC) 3rd Edition*, School of Psychology, Deakin University.

Cummins, R. A. (2010). Subjective wellbeing, homeostatically protected mood and depression: A synthesis. *Journal of Happiness Studies*, 11(1), 1-17.

Cummins, R. A. (2012). The determinants of happiness. *International Journal of Happiness and Development*, 1(1), 86-101.

De Fruyt, F., McCrae, R. R., Szirmák, Z., & Nagy, J. (2004). The Five-Factor personality inventory as a measure of the Five-Factor Model: Belgian, American, and Hungarian comparisons with the NEO-PI-R. *Assessment*, 11(3), 207-215.

Diener, E. (2006). Guidelines for national indicators of subjective well-being and ill-being. *Journal of Happiness Studies*, 7(4), 397-404.

Diener, E., & Chan, M. Y. (2011). Happy People Live Longer: Subjective Well-Being Contributes to Health and Longevity. *Applied Psychology: Health and Well-being*, 3(1), 1-43.

Dinisman, T., & Rees, G. (2014). *Findings from the First Wave of Data Collection*. Retrieved 18 April, 2015, from [www.isciweb.org](http://www.isciweb.org)

Durayappah, A. (2010). The 3P Model: A General Theory of Subjective Well-Being. *Journal of Happiness Studies*, 12(4), 681-716.

DWCPD. (n.d.). About Us. Retrieved March 14, 2014, from <http://www.dwcpd.gov.za/about%20us.html>

Fattore, T., Mason, J., & Watson, E. (2009). When Children are Asked About Their Well-being: Towards a Framework for Guiding Policy. *Child Indicators Research*, 2(1), 57-77.

Fattore, T., Mason, J., & Watson, E. (2012). Locating the Child Centrally as Subject in Research: Towards a Child Interpretation of Well-Being. *Child Indicators Research*, 5(3), 423-435.

Fernandez, L., Mendes, A., Teixeira, A.C. (2012). A review essay on the measurement of child well-being. *Social Indicators Research*, 106(2), 239–257.

Foxcroft, C., & Roodt, G. (2009). *Introduction to Psychological Assessment in the South African context*. (3<sup>rd</sup>edn.). Cape Town: Oxford University Press.

Goswami, H. (2012). Social Relationships and Children's Subjective Well-Being. *Social Indicators Research*, 107(3), 575-588.

Goswami, H. (2014). Children's Subjective Well-being: Socio-demographic Characteristics and Personality. *Child Indicators Research*, 7(1), 119-140.

Government Gazette. (2014). Amendment to Schedule 1 of the Public Services Act, 1994 (Government Gazette 37817, Notice 43, 8 July 2014). Pretoria: Government Printer.

Hambleton, R. K. (2001). The Next Generation of the ITC Test Translation and Adaptation Guidelines. *European Journal of Psychological Assessment*, 17(3), 164-172.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.

Huebner, E. S. (1991). Initial development of the Students' Life Satisfaction Scale. *School Psychology International*, 12, 231-240.

Huebner, E. S. (2004). Research on Assessment of Life Satisfaction of Children and Adolescents. *Social Indicators Research*, 66(1-2), 3-33.

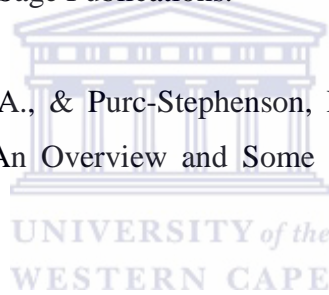
Hughes, A. A., & Kendall, P. C. (2009). Psychometric Properties of the Positive and Negative Affect Scale for Children (PANAS-C) in Children with Anxiety Disorders. *Child Psychiatry and Human Development*, 40(3), 343-352.

Huta, V., & Waterman, A. S. (2014). Eudaimonia and Its Distinction from Hedonia: Developing a Classification and Terminology for Understanding Conceptual and Operational Definitions. *Journal of Happiness Studies*, 15(6), 1425-1456.

International Test Commission (2010). International Test Commission Guidelines for Translating and Adapting Tests. Retrieved April 15, 2015, from <http://www.intestcom.org>

Jacard, J., & Wan, C. K. (1996). *LISREL approaches to interaction effects in multiple regression*. Thousand Oaks, CA: Sage Publications.

Jackson, D. L., Gillaspay, J. A., & Purc-Stephenson, R. (2009). Reporting Practices in Confirmatory Factor Analysis: An Overview and Some Recommendations. *Psychological Methods*, 14(1), 6-23.



Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic Books.

Jones, J. L. (2011). *Adolescent wellbeing in West Africa: Subjective wellbeing of adolescents in Cote d'Ivoire*. Unpublished doctoral dissertation, Tulane University, Louisiana, United States of America.

Kline, R. B. (2010). *Principles and Practice of Structural Equation Modeling*. (3<sup>rd</sup>edn.). New York: The Guilford Press.

Land, K.C., Lamb, V.L. & Mustillo, S.K. (2001). Child and youth well-being in the United States, 1975-1998: Some findings from a new index. *Social Indicators Research*, 56, 241-320.

Lau, A. L. D. (2012). The Personal Wellbeing Index in China. In A. Michalos (Ed.), *Encyclopedia of Quality of Life Research*, (pp. 1-14). New York: Springer.

Laurent, J., Catanzaro, S. J., Joiner, T. E., Rudolph, K. D., Potter, K. I., Lambert, S., et al. (1999). A measure of positive and negative affect for children: Scale development and preliminary validation. *Psychological Assessment, 11*(3), 326-338.

Main, G. (2014). Child poverty and children's subjective well-being. *Child Indicators Research, 7*(3), 451-472.

Mathews, S., Jamieson, L., Lake, L., & Smith, C. (2014). South African Child Gauge. Cape Town: The Children's Institute, University of Cape Town.

Meredith, W. (1993). Measurement invariance, factor analysis and factorial invariance. *Psychometrika, 58*(4), 525-543.

Minkkinen, J. (2013). The Structural Model of Child Well-Being. *Child Indicators Research, 6*(3), 547-558.

Moore, K. A. (1997). Criteria for indicators of child well-being. In R. M. Hauser, B. V. Brown, & W. R. Prosser (Eds.), *Indicators of children's well-being*. New York: Russell Sage Foundation.

Neapolitan, J. L. (1999). A comparative analysis of nations with low and high levels of violent crime. *Journal of Criminal Justice, 27*(3), 259-274.

Nieuwenhuys, O. (1998). Global Childhood and the Politics of Contempt. *Alternatives, 23*(3), 267-289.

OECD. (2013). *OECD Guidelines on Measuring Subjective Well-being*. OECD Publishing. Retrieved 15 May, 2015, from <http://dx.doi.org/10.1787/9789264191655-en>

Pollard, E. L. & Davidson, L. (2001). *Foundations of child well-being*. (UNESCO Education Sector Monograph No. 18). USA: Centre for Child Well-Being.



Pollard, E.L. & Lee, P.D. (2003). Child well-being: A systematic review of the literature. *Social Indicators Research*, 61(1), 59-78.

Pollard, E.L. & Rosenberg, M.L. (2003). The strength based approach to child well being: Let's begin with the end in mind. In M.H Bornstein, L. Davidson, C.L.M. Keyes & K.A. Moore (Eds.), *Well-being: Positive development across the life course* (pp. 13-21). Mahwah: Lawrence Erlbaum.

Proctor, C., Linley, A., & Maltby, J. (2009). Youth life satisfaction measures: a review. *The Journal of Positive Psychology*, 4(2), 128-144.

Rees, G. & Main, G. (eds.). (2015). *Children's views on their lives and well-being in 15 countries: An initial report on the Children's Worlds survey, 2013-14*. York, UK: Children's Worlds Project (ISCWeB).

Republic of South Africa. (2005). Children's Act, No. 38 of 2005. Pretoria: Government Printers.

Republic of South Africa. (2007). Children's Amendment Act, No. 41 of 2007. Pretoria: Government Printers.

Republic of South Africa. (2008). Child Justice Act, No. 75 of 2008. Pretoria: Government Printers.

Russell, J. A. (2003). Core Affect and the Psychological Construction of Emotion. *Psychological Review*, 110(1), 145-172.

Rubin, K. H. (1998). Social and emotional development from a cultural perspective. *Developmental Psychology*, 34(4), 611-615.

Ryan, R.M. & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.

Savahl, S., Adams, S., Isaacs, S., September, R., Hendricks, G., & Noordien, Z. (2015). Subjective Well-Being Amongst a Sample of South African Children: A Descriptive Study. *Child Indicators Research*, 8, 211-226.

Savahl, S., Isaacs, S., Adams, S., Carels, C. Z., & September, R. (2013). An Exploration into the Impact of Exposure to Community Violence and Hope on Children's Perceptions of Well-Being: A South African Perspective. *Child Indicators Research*, 6(3), 579-592.

Savahl, S., Malcolm, C., Slembrouk, S., Adams, S., Willenberg, I. A., & September, R. (2014). Discourses on Well-being. *Child Indicators Research*. 28 October 2014. doi:10.1007/s12187-014-9272-4

Sireci, S. G., Yang, Y., Harter, J., & Ehrlich, E. J. (2006). Evaluating Guidelines For Test Adaptations: A Methodological Analysis of Translation Quality. *Journal of Cross-Cultural Psychology*, 37(5), 557-567.

Snyder, C. R., Hoza, B., Pelham, W. E., Rapoff, M., Ware, L., Danovsky, M., *et al.* (1997). The Development and Validation of the Children's Hope Scale. *Journal of Pediatric Psychology*, 22(3), 399-421.

South African Police Services. (2013). *Annual Report 2012/13*. South African Police Services: South Africa.

The Children's Society. (2014). *The Good Childhood Report*. The Children's Society.

Tiliouine, H., Cummins, R. A., & Davern, M. (2009). Islamic religiosity, subjective well-being, and health. *Mental Health, Religion & Culture*, 12(1), 55-74.

Tomyn, A. J., Tyszkiewicz, M. D. F., & Cummins, R. A. (2011). The Personal Wellbeing Index: Psychometric Equivalence for Adults and School Children. *Social Indicators Research*. doi:10.1007/s11205-011-9964-9

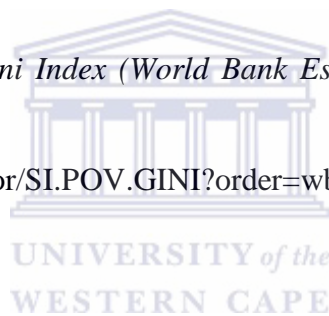
Tomyn, A. J., & Cummins, R. A. (2011). The Subjective Wellbeing of High-School Students: Validating the Personal Wellbeing Index–School Children. *Social Indicators Research, 101*, 405-418.

UNICEF. (2009). *South Africa Annual Report*. Retrieved March 14, 2014, from [http://www.unicef.org/southafrica/SAF\\_resources\\_annual2009.pdf](http://www.unicef.org/southafrica/SAF_resources_annual2009.pdf)

UNICEF. (2012). *Violence against children in South Africa*. South Africa: Department of Social Development/Department of Women, Children and People with Disabilities/UNICEF.

The World Bank. (n.d.a). *Mortality rate, under-5 (per 1,000 live births)*. Retrieved March 12, 2014, from <http://data.worldbank.org/indicator/SH.DYN.MORT/countries?display=default>

The World Bank. (n.d.b). *Gini Index (World Bank Estimate)*. Retrieved June 29, 2015, from [http://data.worldbank.org/indicator/SI.POV.GINI?order=wbapi\\_data\\_value\\_2011+wbapi\\_data\\_value&sort=asc](http://data.worldbank.org/indicator/SI.POV.GINI?order=wbapi_data_value_2011+wbapi_data_value&sort=asc)



Thornton, A. (2001). Introduction and overview. In A. Thornton (Ed.). *The well-being of children and families: Research and data needs* (pp. 3-27). Michigan: University of Michigan Press.

WHO. (1997). *WHOQOL: Measuring Quality of Life*. WHO: Division of Mental Health and Prevention of Substance Abuse.

WHO. (n.d.). *Process of translation and adaptation of instruments*. Retrieved 4 May, 2015, from [http://www.who.int/substance\\_abuse/research\\_tools/translation/en/](http://www.who.int/substance_abuse/research_tools/translation/en/)

United Nations General Assembly (1989). Adoption of the Convention on the Rights of the Child. New York: United Nations.

Widenfelt, B. M., Treffers, P. D. A., de Beurs, E., Siebelink, B. M., & Koudijs, E. (2005). Translation and Cross-Cultural Adaptation of Assessment Instruments Used in Psychological

Research With Children and Families. *Clinical Child and Family Psychology Review*, 8(2), 135-147.

Zaff, J.F., Smith, D.C., Rogers, M.F., Leavitt, C.H., Halle, T.G. & Bornstein, M.H. (2003). Holistic well-being and the developing child. In M.H. Bornstein, L. Davidson, C.L.M. Keyes and K. Moore (Eds.). *Well-being: Positive development across the life course* (pp. 23-32). Mahwah: Lawrence Erlbaum.

