# Validation of the Daily Spiritual Experience Scale in a group of black South African students


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**Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Magister Artium in Applied Positive Psychology* at the North-West University, Vaal Triangle Campus**

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**Examination: November 2019**

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**Preface**

When I got the call to interview for an opportunity to be part of the MA in Positive Psychology course, it was not the best of days but that call elevated all the days until the interview. The interview went so well that I forgot to look at the temporary traffic signs on my way home and turned into on-coming traffic, but nothing could spoil my mood. I was finally in a programme that felt fitting and I found out later that it truly was the right fit for me. The year of coursework was intense and the amount of work was enormous, but ultimately it was therapeutic and transformational. To this day, my reflections of the programme elicit a smile on my face. As a practicing sangoma, my practice is informed by my ancestral guides and all that I have gained from the MAPP course.

I would like to express enormous thanks and gratitude to the following people:

- Prof. Chrizanne van Eeden, for all that you were during this journey, especially for seeing and understanding me.
- Prof. Frik van Eeden for assisting with technical formatting.
- My grandmother, Annah Mhaule, ngikutsandza ngemoya wami wonke. Ngiyabonga Make, you are my original mother.
- My mother, Lindiwe T Mdluli and my father, Jabulani P Shube, you were young when you had me. I joke that I raised you both and most of it is true, it taught me discipline and self-directed determination.
- My brothers, Mlungisi Shube and Luthando Shube, being your sister has been amazing and I love you both.
- My extended family for always being warm and kind with me despite my absence.
- The 324 research participants.
- My ancestors and ancestral guides, Khayela, Ndindamave and Mfaco. Thank you for the gifts of healing, ngitfobela nine na Nkulunkulu. Ndauwe!

**Declaration**

I, Innocentia Millicent Shube, declare that the mini-dissertation "Validation of the daily spiritual experience scale in a group of black South African students" is my own work and that the results and findings reported are those of the author and in line with relevant literature references as shown in the list of references.

I, additionally, declare that the contents of this research were not and will not be submitted for any other qualification(s) at other institutions.

INNOCENTIA SHUBE,

November 2019

**Permission of Supervisor**

I, Chrizanne van Eeden, hereby give permission to Innocentia M. Shube to submit this document as a mini-dissertation for the qualification MA in Positive Psychology.

Furthermore, I confirm that this mini-dissertation has been written in the article format that is in line with the 2019 General Academic Rules (4.4.2 and 4.10.5) of the North-West University.

Supervisor: Professor Chrizanne van Eeden

## Language Editor Letter

**Wendy Barrow**
Language Practitioner
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28 October 2019

**EDITING CERTIFICATE**

To whom it may concern

This letter serves to confirm that I have edited the mini-dissertation with the title: *Validation of the Daily Spiritual Experience Scale in a group of black South African students*. I am a qualified and registered language practitioner.

I acknowledge that the document has undergone a proper and professional language edit (including the checking of spelling, grammar, register). The onus rests on the client to work through the proposed changes after the edit and accept or reject these changes.

Yours sincerely

Wendy Barrow

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Translation (Afrikaans, English, German); Editing – academic and technical (Afrikaans, English)

**Summary**

This study's principal aim was to statistically validate the Daily Spiritual Experience Scale (DSES) in a group of black South African students. In order to do so, the research objectives were:

- to investigate the internal consistency reliability of the DSES;
- to investigate factorial validity of the DSES; and
- to investigate the convergent and discriminant validity of the DSES within a black South African student population.

A literature review was done to become familiar with the theoretical conceptualisation of the constructs spirituality, spiritual well-being and complete mental health. The nature and methodology of scale validation was also studied.

Data was collected by means of the following psychometric instruments: The Daily Spiritual Experience Scale (DSES) (Underwood & Teresi, 2002), Mental Health Continuum – Short Form (MHS-SF) (Keyes, 2002, 2006; Keyes et al., 2008) and the Patient Health Questionnaire (PHQ) (Kroenke, Spitzer & Williams, 2001).

Data was analysed by using mainly the Mplus Version 8.2 (Muthén & Muthén, 1998-2017) statistical analysis software program, although the SPSS (IBM Corporation, 2018) was also used.

Statistical measurement models were identified that proved to have a good statistical fit and these models were used to analyse the data for validation purposes.

The findings were that the DSES had good psychometric properties and showed the same unidimensional factor structure found by the original authors of the DSES. Convergent validity was found with significant positive correlation of the DSES with the three dimensions of the MHC namely emotional, psychological and social well-being. Divergent validity was found for the DSES showing an insignificant negative correlation with the PHQ.

Limitations of the study were indicated and recommendations for future research were provided.

This study was successful in meeting the objectives which lead to an adequate answering for the research question.

**Keywords:** compassion, daily spiritual experience, gratitude, love, mental health, spirituality, spiritual well-being, transcendence, well-being.

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# CHAPTER 1

## BACKGROUND AND LITERATURE REVIEW OF THE STUDY

**Keywords:** compassion, daily spiritual experience, gratitude, love, mental health, spirituality, spiritual well-being, transcendence, well-being

Validation of measuring instruments is important for the social sciences because it allows for the measurement, evaluation and testing of constructs and aids in the development and planning of interventions (Cromhout, 2015). This study aimed to validate the Daily Spiritual Experience Scale (DSES), a domain-specific measure of spiritual well-being, in a South African student context. It was believed that such a validation study could provide clarity on the conceptualisation of the theoretical constructs used and would indicate whether the DSES measurement indeed measures the variable it aims to measure (Babbie, 2004). Although daily spiritual experience is articulated in spiritual well-being theory which falls under the broad study of religiosity and spirituality, this study was embedded in spirituality only.

In this chapter, the literature that forms the theoretical framework of the study is presented, as well as the methodology with which the empirical research was done. Since the theoretical and contextual background of the study is given in this chapter, some duplication of the content could be observed in the other sections of the mini-dissertation.

**Spirituality, Spiritual Well-being and Daily Spiritual Experience (DSE)**

***Spirituality*** and the experience of transcendence permeates most peoples' lives (Emmons, 2000; Jantos & Kiat, 2007; Moberg, 1971; Underwood, 2011) and spirituality is often salient in interventions that are focused on well-being (Good & Willoughby, 2005; Piedmont, 1999; Underwood, 2011). There has been a growing interest in research on spirituality and although studies differ on conceptualising and operationalising spiritualty, there seems to be consensus in literature on the strong and positive role of spirituality for enhancing well-being (Kalkstein & Tower, 2009; Moberg, 1971; Piedmont, 1999; Underwood, 2011; Underwood & Teresi, 2002). A perspective by Emmons (2000) was that spirituality is an intelligence that is characterised by transcendence and heightened states of consciousness, that spirituality finds the sacred in the mundane, has problem solving resources and is a personal virtue. Another perspective is that spirituality is socially derived and inherently human (Wheeler, Ampadu, & Wangari, 2002) and that spirituality is a psychosocial resource of the individual. Spirituality as an area of scientific inquiry should be understood as multidimensional and therefore, any definition would need to be inclusive of context, practice, ritual, culture and various other factors (Kalkstein & Tower, 2009). It is partially this deeply contextual nature of spirituality that has made it difficult to study objectively or empirically.

***Spirituality and religiosity***. Currently in the literature the conceptual distinction between spirituality and religiosity is still unclear. In fact most scholars recognise that spirituality and

religiosity are closely related (Dein, 2005; Hill et al., 2000). Hill et al. (2000) advanced the argument that such a distinction should be approached with an understanding that there is a lot of overlap in the definition and experience of spirituality and religiosity, while Hill and Pargament (2003) warned against polarising the two constructs, as this may produce a superficial understanding of these values in the lives of individuals in their everyday contexts. Piedmont (2004) however, pointed to the scientific and conceptual differences between spirituality and religiosity stating that spirituality is an individual attribute whereas religiosity is an institutional attribute. Spirituality therefore, is the more inclusive term used for a search for the sacred, while religion refers to a search grounded specifically in traditional contexts such as formal religious institutions. Both comprise of a need to relate to a higher order of being and often require a degree of self-transcendence (Paloutzian & Park, 2005).

Furthermore, Good and Willoughby (2005) conceptualised spirituality as an individual's personal beliefs or intrinsic commitment to such beliefs. Spirituality, according to these authors (Good & Willoughby, 2005; Underwood & Teresi, 2002), is more concerned with the transcendent, addressing issues related to worldview and the meaning of life and it is quite possible to be spiritual while not being religious. Yet it is important to note that often spirituality is experienced and practiced within religious contexts (Hill & Pargament, 2003). In this study, spirituality should be understood to be separate and distinct from religiosity.

***Spiritual well-being***. In the literature, there seems to be a conflation of spirituality and spiritual well-being and it is not clear whether these concepts are understood to be separate or not. Spirituality and spiritual well-being have only fairly recently surfaced in well-being research (Wheeler et al., 2002) and this is attributable to the inconsistencies in conceptualisations and definitions of the construct (Piedmont, 2004). Kwon (2008) interestingly saw African spirituality as a phenomenological and contextual state that influences the understanding and experience of both well-being and spirituality outside of the global north, where such constructs and phenomena are understood and experienced differently.

The important role of spiritual well-being, transcendence and daily spiritual experience in general health and wellness, has been alluded to by earlier research on spirituality (Emmons, 2000; Jantos & Kiat, 2007; Moberg, 1971, 1984; Underwood, 2011). Spiritual well-being, specifically DSE, is a predictor of adaptive outcomes such as better performance of health behaviours and lowered alcohol intake (Kalkstein & Tower, 2009; Underwood, 2011), better psychological adjustment (Van Dyke, Glenwick, Cecero, & Kim, 2009) less

psychopathology (Kalkstein & Tower, 2009), less family conflict (Kwon, 2008) and better relational well-being (Kalkstein & Tower, 2009). The prominent role of spiritual well-being in positive behaviour, health and psychosocial well-being is certain (Kalkstein & Tower, 2009; Underwood, 2011), while lower DSE has been associated with anxiety, depression and burnout (Ng et al., 2009). For conceptual clarity, this study proposes to study spiritual well-being, by means of DSE, viewed as the perceived life-long (Moberg, 1984) presence of transcendence, gratitude and compassionate love in individuals' lives (Underwood, 2011).

***Daily spiritual experience*** is conceptualised as individuals' perception of the transcendent in their day-to-day lives, with the focus being on spiritual experience rather than religion or theistic affiliation and ritual (Underwood & Teresi, 2002). According to Underwood and Teresi (2002), the DSE is a construct that is concerned with the more common practical experiences and phenomena through which individuals experience their broader spirituality. These common and practical experiences refer to the seemingly mundane yet sacred. The DSE has been operationalised with the DSES and the items of the DSES tap into perception, interaction and experience of the transcendent, while the underlying theoretical assumption is that DSE contributes to well-being (Underwood & Teresi, 2002). Having been found to be valid and reliable, the DSES can be used among various populations of differing geographical, demographic and cultural make-up (Kalkstein & Tower, 2009; Underwood, 2011).

Although the DSE was not conceptually placed under spiritual well-being but within the broad framework of spirituality, in this study, Underwood and Teresi's (2002) conceptualisation of daily spiritual experience (DSE) as related to spiritual well-being, is used. The DSES has two identified factors, namely time and ordinary daily life, where spirituality is embodied and practiced, and it taps into the following domains: gratitude, transcendence and compassionate love (Underwood & Teresi, 2002), that are briefly described as follows.

*Gratitude* is a state of thankfulness for having received help that is perceived as invaluable (Wood, Froh, & Geraghty, 2010). It is accompanied by feelings of appreciation when experiencing altruistic deeds and helpfulness (Froh, Kashdan, Ozimkowski, & Miller, 2009). Gratitude can also be towards the self, others and objects, the metaphysical as well as the spiritual. It involves a general positive life orientation towards the world (Froh et al., 2009; Wood, Joseph, Llyod, & Atkins, 2009) and is associated with increased well-being (Winfield, 2013).

*Transcendence* is a basic capacity inherent in individuals and it acts as a source of motivation or innate need that influences certain behaviour, while it provides a normative emphasis on experiencing divinity (Piedmont, 1999, 2004). Transcendence was also recognised by Emmons (2000) as a core component of spirituality and thus of spiritual well-being. Kwon (2008) however, warned that seeking to continuously experience transcendence may lead an individual to being unable to deal with their current reality.

*Compassionate love* is an other-centred love, which means that in addition to love that can be felt for close ones in families and relationships, there is a type of altruistic love that extends to humanity in general. Sprecher and Fehr (2005, p. 630) defined compassionate love as "a type of love that can be experienced for a variety of others, including all of humankind".

In addition to the DSES and its domains, another construct from the field of Positive Psychology that will be included in this study, namely complete mental health, will be discussed briefly below. This construct is related to spirituality and to spiritual well-being and is used in this research to determine convergent validity of the DSES.

**Complete Mental Health**

The complete mental health model of Keyes (2002, 2006) is a three-dimensional model that includes components of hedonic and eudaimonic well-being. One end of the complete mental health continuum (MHC) is referred to as flourishing, which includes feeling good (emotional well-being), functioning well (psychological well-being) and relating well to others (social well-being) (Keyes, 2002). Feeling good refers to hedonic states of pleasure and enjoyment, while functioning well refers to eudemonic states of actualisation, purpose and meaningfulness (Keyes, 2002). Social well-being as an expression of positive social health, is an individual's assessment of their circumstance and functioning in society (Keyes et al., 2008). The other end of the MHC is called languishing, which is where individuals have few experiences of the good life. In languishing, individuals often have feelings of emptiness and hollowness and feelings of social isolation or disconnection. Individuals who fall in the middle of the MHC are considered to be moderately mentally healthy. Keyes et al.'s (2008) conceptualisation of complete or positive mental health has been found to be suitable for use in South African research (Khumalo, Temane, & Wissing, 2012; Van Schalkwyk & Wissing, 2010). The DSES was reported by Sanchez, Arocena, and Ceballos

(2010), to be positively correlated with emotional, psychological and social well-being, which are the dimensions of positive mental health.

**Measurements of Spiritual Well-being**

Typically, spiritual well-being has been measured along with religiosity or religious affiliation and participation. Some measures also link spiritual well-being to relational well-being. The Spiritual Experience Index (SEI) measures faith and spiritual journey (Genia, 1991, 1997), the Spiritual Well-being Scale (SWBS) measures perceived states of religiosity and existential well-being (Paloutzian & Ellison, 1982), while the Spiritual Health and Life-Orientation Measure (SHALOM) measures spiritual health or well-being through the quality of intra and interpersonal relationships, as well as relationships with meso and macro environments including a relationship with a deity (Fisher, 2010, 2016).

There are several measures that specifically focus on investigating the relationships between psychological constructs and the constructs of the DSES (Underwood, 2011, 2017) for example, between the DSE and temporal changes (George & Park, 2013; Tong, 2017), alcohol abuse (Churakova, Burlaka, & Parker, 2017), meaning in life amongst people in different contexts (George & Park, 2017; Meng & Dillon, 2014; Wnuk & Marcinkowski, 2014) as well as positive coping strategies such a managing burnout, life satisfaction, well-being and prosocial behaviours (Underwood & Teresi, 2002; Underwood, 2011). Since the development of the DSES, studies have used the measure in various contexts. For example, among young people, the DSE was found to have a positive relationship with psychological adjustment (Underwood, 2011) and a negative relationship with alcohol dependence (Lee, Veta, Johnson, & Pagano, 2014).

The above discussion focused on spirituality and spiritual well-being, on daily spiritual experience and on complete mental health. The section below will discuss validation of a measuring instrument such as DSES.

**The Validation of a Measuring Instrument**

The validation of psychometric instruments is important, especially in various contexts where the constructs measured may manifest differently. Validated instruments make it possible to develop interventions and scale validation allows for psychometric properties to be investigated and determined (Cromhout, 2015).

According to Moerdyk (2009), by means of validation we can test theory (e.g., determining if the factor structure suggested by the theory is valid) and determine how the

constructs measured by a specific scale operate in different cultures or groups of people. Validated measures also add credibility to research. If it is not certain that a measure measures what it claims to do, that it gives consistent results and that it is valid for the population in which it is used, we cannot trust the results found with such measures to come to valid conclusions about the domains of the phenomena measured and the results cannot be reliably used to evaluate, plan and focus interventions. When using measures, it is important to know that they are reliable, valid, and fair (Cromhout, 2015), and therefore reliability and validity and scale fairness will be briefly described below.

**Reliability**

Reliability refers to the consistency with which a measure obtain the same result when the phenomenon that is measured remains unchanged (Engel & Schutt, 2014). Reliability is a prerequisite for the validity of a measure, because if a measure yields inconsistent scores we cannot attach any value to the results obtained from it and therefore we cannot make conclusions about the phenomenon that we want to measure (Gravetter & Forzano, 2009). Reliable measures are also less affected by random error and chance variation (Engel & Schutt, 2014). There are various forms of reliability of a measure, such as those that will be briefly given below.

***Test-retest reliability*** refers to when a measure gives similar scores when it is applied to the same group of people on different occasions (Moerdyk, 2009). Test-retest reliability means that the scores on a measure, taken at different time points, correlate when the phenomenon measured does not change (Engel & Schutt, 2014). Test-retest reliability also refers to a measure's stability over time, and the statistic derived from this correlation is called a coefficient of stability (Moerdyk, 2009).

***Internal consistency reliability*** means that all parts of a measuring instrument measure the same phenomenon and no other irrelevant properties. Internal consistency reliability is calculated by correlating the different parts of a measure with each other (Moerdyk, 2009). When the different parts have a high correlation, it shows internal consistency reliability, meaning that the scale measures the same aspect or phenomena, while low correlations indicate that the different parts of the scale measure different aspects or phenomena. The statistic derived from this correlation is called a coefficient of internal consistency (Moerdyk, 2009).

The split-half method is another way to calculate internal consistency reliability and involves splitting the measure in half and correlating the two halves with each other (Engel & Schutt, 2014). Generally, a Cronbach alpha values higher than 0.70 is viewed as acceptable (Moerdyk, 2009).

***Alternate forms of reliability*** are found when somewhat different versions of the same measure are administered to the same group and the scores on the measures correlate highly (Engel & Schutt, 2014; Moerdyk, 2009). This correlation is called a coefficient of equivalence (Moerdyk, 2009).

***Interrater reliability*** is found when the ratings of two or more raters correlate (Foxcroft & Roodt, 2009; Moerdyk, 2009). This correlation is expressed as an inter-scorer reliability coefficient (Foxcroft & Roodt, 2009). The higher the correlation, the greater the confidence that the ratings are indeed indicative of the phenomenon being measured and not the views of the raters (Engel & Schutt, 2014).

***Intrarater reliability*** implies that the same rater measures the same phenomenon on numerous time points (Engel & Schutt, 2014), and refers to the consistency by which one rater rates the scores on a scale. This correlation is expressed as an intra-scorer reliability coefficient (Foxcroft & Roodt, 2009).

**Validity**

Validity means the extent that a measure measures the phenomenon that it claims to measure (Moerdyk, 2009) and how well it measures that phenomenon (Foxcroft & Roodt, 2009). It also refers to how significantly a measure of a phenomenon is related to other valid measures of that phenomenon and the known or supposed correlates of that phenomenon, while it is unrelated to other phenomena or correlates of other phenomena (Engel & Schutt, 2014). There are various ways to determine the validity of a measure, which will be briefly explained below.

***Face validity*** is obtained when, upon examining the measure it relates more to the phenomenon that it intends to assess than to other phenomena (Engel & Schutt, 2014), in other words when the items of the scale seem to be appropriate for measuring the specific phenomenon that it intends to measure (Moerdyk, 2009). Face validity on its own is not sufficient to indicate validity, as it lacks empirical support (Engel & Schutt, 2014).

***Content validity*** is found when a measure assesses the full range of the meaning of the phenomena that it intends to measure (Engel & Schutt, 2014) that is, when the scale

accurately represent the content of the phenomena that it sets out to measure (Moerdyk, 2009). The meaning range of a phenomenon is determined by expert opinion and literature reviews (Engel & Schutt, 2014; Moerdyk, 2009) and therefore, content validity also lacks empirical support because expert views on whether the content of a phenomenon is fully captured by a measure, may differ (Engel & Schutt, 2014).

***Construct (theoretical) validity*** of a measure is obtained when "it behaves as it should relative to other constructs in the theory" (Engel & Schutt, 2014, p. 70), meaning that it produces results in line with what we expect theoretically (Moerdyk, 2009). Construct validity implies a deductive approach and a hypothesis that there are correlational relationships among certain constructs (Engel & Schutt, 2014). Different types of construct validity exist, for example convergent validity, discriminant validity and factorial validity (Moerdyk, 2009).

***Convergent validity*** refers to results found with a scale that correlates with results obtained from another similar scale and with the results found with measures that are theoretically in line with the scale (Moerdyk, 2009). A measure has *discriminant validity* when the measure does not correlate with measures that it theoretically is not expected to correlate with (Moerdyk, 2009). *Factorial validity* refers to the underlying factor structure of a measure (Foxcroft & Roodt, 2009). A measure is theoretically good when its factor structure is in accordance with the underlying theory and is also similar to that of other measures that measure the same construct (Moerdyk, 2009). Factorial validity is obtained by factor analysis, which is an analysis of the interrelationships among variables by determining the common variance between the variables (Foxcroft & Roodt, 2009). Factor analysis is used to determine the factor structure of a measure and to identify its subscales (Foxcroft & Roodt, 2009). A distinction is usually made between exploratory and confirmatory factor analysis (Moerdyk, 2009). Exploratory factor analysis determines the optimal factor structure that underlies the data (i.e., identifying the many factors the measure may consists of), whereas confirmatory factor analysis intends to confirm whether the data is compatible with a specific factor structure (i.e., determining if the measure indeed consists of, for example, two factors) (Moerdyk, 2009).

**Fairness in the Cross-cultural use of Measuring Instruments**

Even though a measure may be valid and reliable in one context, it cannot be assumed that it is also valid and reliable in other contexts or for other populations. Concepts that are known

to one culture may be unfamiliar to another, or the meaning of concepts may differ from culture to culture. This means that scale items may operate differently across various groups (De Kock, Kanjee, & Roodt, 2013), which could result in item bias. It is therefore essential that measures are validated for the populations for which they will be used (Cromhout, 2015). This ensures cultural equivalence and fairness in assessment, as the risk of bias when responding to unfamiliar concepts or of having to answer questions in an unfamiliar language, is reduced (De Kock et al., 2013; Foxcroft & Roodt, 2009).

As mentioned above, it is important to indicate the reliability, validity and cultural equivalence of instruments when they are used in different contexts. In fact, the use of a scale in each new context and population requires an investigation of the scale's psychometric properties in that context. Scale validation is a process that often includes several studies and a single study seldom addresses all aspects of scale validation (Cromhout, 2015). In this study, the focus will be on the internal consistency reliability, the factorial, convergent and discriminant validity of the DSES in a South African student context.

**Research Questions and Aims**

From a review of literature on spirituality, spiritual well-being and daily spiritual experience, as well as of the importance of contextual reliability and validity of measuring instruments, a *research question* emerged as: Can the DSES be validated by means of internal consistency reliability, factorial and convergent validity in a group of black South African students?

In order to answer the research question, the following *aim* was formulated: The aim of the study is to validate the Daily Spiritual Experience Scale (Underwood & Teresi, 2002) by means of the following *objectives*: the first objective was to investigate the internal consistency reliability of the DSES, the second objective was to investigate factorial validity of the DSES and the third objective was to investigate the convergent and discriminant validity of the DSES within a black South African student population. The research methodology of this study is described next.

**Research Methodology**

This study was conducted by means of a literature review and an empirical investigation.

**Literature study**

A literature review was done to achieve the purposes stated by Creswell (2013), namely to be informed of results from other studies on similar topics, to become cognisant of the broad and

ongoing dialogue in literature on the topic and to place the study in a theoretical framework and obtain benchmarks for comparing results of the research.

## Empirical research

### *Research design.*

This study followed a quantitative approach from the positivist paradigm whose ontology is that truth is observable and measurable (Creswell, 2013; Frels & Onwuegbuzie, 2013). More specifically this study had a quantitative cross-sectional design, where data was collected only once.

### *Participants and setting.*

Data for this study was collected from students at a South African university. The sample consisted of participants who were above 18 years of age and gave informed consent to participate in the study. Approximately N=324 students were included in this study.

Authorities at the university's research division, lecturers, as well as academic support service practitioners were the gatekeepers who facilitated recruitment and assisted with data collection. Approval letters from the Vaal University of Technology's Research Ethics Committee served as proof of permission for and support of the research. Informed consent was sought from participants in the study and their anonymity was maintained since the measuring instruments were completed electronically, at a time and location convenient to participants. Please refer to the ethical considerations section for further information on procedures that were employed in this research.

### *Data collection*

was conducted online using licensed online survey software. Student participants were given a survey link and they completed the survey in their own time within a set submission deadline. Data was collected by means of the following questionnaires.

***Measuring instruments.*** The first section in the questionnaire battery tapped into socio-demographic variables, including age, gender and spiritual/religious affiliation. The second section consisted of three measuring instruments: The Daily Spiritual Experience Scale (Underwood & Teresi, 2002), Mental Health Continuum – Short Form (Keyes, 2002, 2006; Keyes et al., 2008) and the Patient Health Questionnaire (Kroenke, Spitzer, & Williams, 2001). All these questionnaires are in public domain for use in research. A brief discussion of each follows.

*Daily Spiritual Experience Scale (DSES) of Underwood and Teresi (2002).* The DSES is a 16-item scale to measure daily spiritual experience. It is one-dimensional and includes items that tap into dimensions, such as mercy, gratitude, awe and a sense of connection with the transcendent, as well as compassionate love. The DSES has a Likert-type scale that ranges from: *Many times a day,* to *Never*. This scale has been validated in several populations all over the world (Underwood, 2011), for example in a Chinese group, a translated DSES had a Cronbach alpha above 0.95 (Ng et al., 2009) and in a Brazilian sample, the scale was found to have temporal stability (Kimura, de Oliveira, Mishima, & Underwood, 2012). In a review of the scale, Underwood (2011) found evidence of good psychometric properties and internal consistency with Cronbach's alphas above .88 in the initial test and above 0.90 at retest. In the scale's original validation study, Underwood and Teresi (2002) found that among an American sample, the DSES had good construct validity when the DSES was correlated with health and quality of life variables, a finding that was supported in research done by Kalkstein and Tower (2009). To the researcher's knowledge, the DSES has not been used in South Africa.

*Mental Health Continuum – Short Form (MHC-SF) of Keyes (2002, 2006; Keyes et al., 2008).* The MHC-SF is a 14-item scale to measure positive mental health. It has a three-dimensional structure, consisting of emotional well-being (3 items), psychological well-being (6 items) and social well-being (5 items). The MHC-SF has a Likert-scale ranging from 0 (*never*) to 5 (*every day*) with items such as: *During the past month, how often did you feel that people are basically good?* The three-factor structure has been confirmed in multiple samples all over the world, including the United States of America (Keyes, 2002), the Netherlands (Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011) and South Africa (Keyes et al., 2008). In USA samples, Keyes (2002, 2006) consistently found evidence of good psychometric properties as shown by reliability indices ranging between 0.57 and 0.71, as well as adequate construct validity. Lamers et al. (2011) found that among the Dutch sample, the MHC-SF had a test-retest reliability averaging 0.68 at 12 weeks and 0.65 at 40 weeks. The MHC-SF has also been found to be reliable (reliability score of 0.74) and valid in a South African sample (Keyes et al., 2008). The DSES has shown positive correlations with various aspects of emotional and psychological well-being, improved health, social interaction and support and overall personal adjustment (Liang, Tracy, Kenny, Brogan, & Gatha, 2010) and therefore, the MHC will be included in this research for convergent validity purposes.

*Patient Health Questionnaire (PHQ-9) of Kroenke, Spitzer and Williams (2001).* The PHQ-9 is a 9-item scale to measure depression and other mental disorders encountered in healthcare settings. The scale is unidimensional and assesses symptoms of depression according to nine criteria of the Diagnostic and Statistical Manual IV (DSM-IV). In addition to the nine items, the scale has another item that assesses the influence of depression experienced on the daily functions of a person. To assess the intensity and prevalence of symptoms, a four-point Likert type scale is used. The PHQ-9 had an internal reliability of 0.89 and 0.86 in the validation studies (Kroenke et al., 2001) and has been validated for use in different contexts, including Africa (Adewuya, Ola, & Afolabi, 2006; Richardson et al., 2010). Adewuya et al., (2006) found that the PHQ-9 was valid and reliable for use among Nigerian students, while the test-retest reliability indices of the PHQ-9 have been found to be consistently above 0.65 (Adewuya et al., 2006; Kroenke et al., 2001; Richardson et al., 2010). The PHQ-9 has been used in South African research by Botha (2011) and Cromhout (2015). The PHQ-9 is included in this study to determine the by discriminant validity of the DSES and significant negative correlations are expected.

***Data analysis.***

Data was analysed in four stages using the Mplus Version 8.2 statistical analysis software program (Muthén & Muthén, 1998-2017). Descriptive statistics were calculated, and to establish factorial validity and internal consistency reliability confirmatory factor analysis was done. Convergent validity was established by correlation patterns between the scores of the DSES and the subscales of the MHC-SF (EWB, PWB, SWB). To established divergent validity, the DSES was correlated with a depression measure (PHQ-9).

**Ethical Considerations**

This study forms part of a Master of Arts degree in Applied Positive Psychology. Participants were students at a South African university and the authorities at the university's research division, as well as in academic departments, were the gatekeepers who facilitated participant recruitment. Lecturers were requested to act as recruiters and invited their students to participate in the study. This was done by giving a brief introduction to the research and then guiding students to an online survey link where they found a complete explanation of the research, ethical principles involved, their rights as participants and guidelines for their involvement. From there, informed consent was sought electronically where participants clicked 'yes' to continue onto the consent letter to participate in the study or they clicked 'no'

to decline participation. Participants gave consent by clicking 'yes' after reading the consent letter.

After participants had completed the consent form they continued to the second part of the survey which sought information about participant age, gender, race and religious affiliation. Once the second part was completed the questionnaires began. It was anticipated that participants would take about 15 to 30 minutes to complete the questionnaires. As this was an online study done using QuestionPro™, there was no face-to-face interaction with participants. Students participated voluntarily, informed consent was sought and their responses on questionnaires were handled confidentially.

In reporting on the data received from the participants, no reference was made in which participants can be personally identified. The data obtained will be used for scientific research and publication purposes only and will be stored for a period of five years as required by the North-West University (NWU). Data storage is and will be on the personal computer of the researcher in a password-protected file. Individual students who require feedback on their questionnaire scores, could contact the researcher by e-mail for such purposes. No negative outcomes were expected or experienced from participating in this study, however assistance was offered to any participant who indicated a need for it. Such assistance involved references to the university's student support services.

The research for this study was conducted with adherence to the high ethical principles required by the NWU and as stipulated by the Basic Sciences Research Ethics Committee (BaSSREC), from which ethical clearance for the research was sought (No: N W U - HS - 2 0 1 7 - 0 1 4 5).

**Proposed Outline of Mini-dissertation**

Chapter 1: Background and introduction

Chapter 2: Article: Validation of the Daily Spiritual Experience Scale for use with South African students

Chapter 3: Conclusions, limitations, and recommendations.

**References**


Adewuya, A. O., Ola, B. A., & Afolabi, O. O. (2006). Validity of the patient health questionnaire (PHQ-9) as a screening tool for depression amongst Nigerian university students. *Journal of Affective Disorders, 96*(1), 89-93.

Babbie, E. R. (2004). *The practice of social research*. Belmont, CA: Thomson/Wadsworth.

Botha, M. N. (2011). *Validation of the Patient Health Questionnaire (PHQ-9) in an African context*. (Master's dissertation). Retrieved from http://dspace.nwu.ac.za/handle/10394/4647

Churakova, I., Burlaka, V., & Parker, T. W. (2017). Relationship between alcohol use, spirituality, and coping. *International Journal of Mental Health and Addiction*. doi.org/10.1007/s11469-017-9759-6

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: Sage publications.

Cromhout, A. (2015). Validation of the Basic Psychological Needs Scale in a South African student group. (Master's dissertation). Retrieved from https://repository.nwu.ac.za/handle/10394/17596

De Kock, F., Kanjee, A., & Roodt, G. (2013). Cross cultural test adaptation and translation. In C. Foxcroft & G. Roodt (Eds.), *Introduction to psychological assessment in the South African context* (4th ed., pp. 83-106). Johannesburg: Oxford University Press.

Dein, S. (2005). Spirituality, psychiatry, and participation: A cultural analysis. *Transcultural Psychiatry*, *42*, 526-544.

Emmons, R. A. (2000). Is Spirituality an Intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion*, *10*(1), 3-26. doi: 10.1207/S15327582IJPR1001_2

Engel, R. J., & Schutt, R. K. (2014). *Fundamentals of social work research* (2nd ed.). Thousand Oakes, CA: Sage.

Fisher, J. (2010). Development and application of a spiritual well-being questionnaire called SHALOM. *Religions*, *1*, 105-121.

Fisher, J. (2016). Selecting the Best Version of SHALOM to Assess Spiritual Well-Being. *Religions*, *7*(45). doi: 10.3390/rel7050045

Foxcroft, C., & Roodt, G. (2009). *Introduction to psychological assessment in the South African context*. Johannesburg: Oxford University Press.

Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering questionnaire instruments with qualitative interviews: A mixed research approach. *Journal of Counselling and Development*, *91*, 184-194.

Froh, J. J., Kashdan, T. B., Ozimkowski, K. M., & Miller, N. (2009). Who benefits from a gratitude intervention in children and adolescent? Examining positive affect as a moderator. *The Journal of Positive Psychology, 4*(5), 408-422.

Genia, V. (1991). The spiritual experience index: A measure of spiritual maturity. *Journal of Religion and Health*, *30*(4), 337-347.

Genia, V. (1997). The spiritual experience index: revision and reformulation. *Review of Religions Research*, *38*, 344-361.

George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *The Journal of Positive Psychology*, *8*(5), 365-375. doi.org/10.1080/17439760.2013.805801

George, L. S., & Park, C. L. (2017). Does spirituality confer meaning in life among heart failure patients and cancer survivors? *Psychology of Religion and Spirituality*, *9*(1), 131-136. doi.org/10.1037/rel0000103

Good, M., & Willoughby, T. (2005). The role of spirituality versus religiosity in adolescent psychosocial adjustment. *Journal of Youth and Adolescence*, *35*(1), 41-55.

Gravetter, F. J., & Forzano, L. B. (2009). *Research methods for the behavioural sciences*. Belmont, CA: Wadsworth Cengage Learning.

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualizing and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, *58*(1), 64-74.

Hill, P. C., Pargament, K. I., Hood, R.W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour*, *30*(1), 52-77.

Jantos, M., & Kiat, H. (2007). Prayers as medicine: How much have we learned? *Medical Journal of Australia*, *186*(10), 51-53.

Kalkstein, S., & Tower, R. B. (2009). The daily spiritual experiences scale and well-being: Demographic comparisons and scale validation with older Jewish adults and a diverse internet sample. *Journal of Religion and Health*, *48,* 402-417. doi 10.1007/s10943-008-9203-0

Keyes, C. L. (2006). Mental health in adolescence: Is America's youth flourishing? *American Journal of Orthopsychiatry, 76*(3), 395.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behaviour, 43*, 207-222.

Keyes, C. L. M., Wissing, M. P., Potgieter, J. P., Temane, Q. M., Kruger, A., & Van Rooy, S. (2008). Evaluation of the mental health continuum – short form (MHC-SF) in Setswana speaking South Africans. *Clinical Psychology and Psychotherapy, 15*, 181-192.

Khumalo, I. P., Temane, Q. M., & Wissing, M. P. (2012). Socio-demographic variables, general psychological well-being and the mental health continuum in an African context. *Social Indicators Research*, *105*(3), 419-442.

Kimura, M., de Oliveira, A. L. L. S., Mishima, & Underwood, L. G. (2012). Cultural adaptation and validation of the Underwood's Daily Spiritual Experience Scale - Brazilian version. *Revista da Escola de Enfermagem da USP*, *46*, 99-106.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The Phq-9. *Journal of General Internal Medicine, 16*(9), 606-613.

Kwon, S. (2008). Well-being and spirituality from a Korean perspective: Based on the study of culture and subjective well-being. *Pastoral Psychology*, *56*, 573-584. doi 10.1007/s11089-008-0134-1

Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, *67*(1), 99-110.

Lee, M. T., Veta, P. S., Johnson, B. R., & Pagano, M. E. (2014). Daily spiritual experience and adolescent treatment response. *Alcoholism Treatment Quarterly*, *32*, 271-298. doi: 10.1080/07347324.2014.907029

Liang, B., Tracy, A. J., Kenny, M. E., Brogan, D., & Gatha, R. (2010). The relational health indices for youth: An examination of reliability and validity aspects. *Measurement and Evaluation Counselling and Development*, *42*(4), 255-274. doi: 10.1177/0748175609354596

Meng, W. C., & Dillon, D. (2014). Meaning making model: inner purpose, goals, and religiosity / spirituality partially predict acceptance strategies and volunteerism behaviours. *International Journal of Existential Psychology and Psychotherapy*, *5*(1), 105-123.

Moberg, D. O. (1971). *Spiritual well-being: Background and issues*. Washington, DC: White House Conference of Aging.

Moberg, D. O. (1984). Subjective measures of spiritual well-being. *Review of Religious Research*, *25*(4), 351-364.

Moerdyk, A. (2009). *The principles and practice of psychological assessment*. Pretoria, South Africa: Van Schaik.

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus statistical analysis with latent variables: Users' guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Ng, S. M., Ted, C. T., Fong, E., Tsui, Y. L., Friendly, A. Y., & Law, S. K. W. (2009). Validation of the Chinese version of Underwood's Daily Spiritual Experience Scale: Transcending cultural boundaries? *International Journal of Behavioural Medicine*, *16*, 91-97.

Paloutzian, R. F., & Ellison, C.W. (1982). Loneliness, spiritual well-being, and quality of life. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* . New York: Wiley.

Paloutzian, R. F., & Park, C. L. (2005). *Handbook of the Psychology of Religion and Spirituality* (1st ed.). New York, NY: The Guilford Press.

Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, *67*(6), 985-1013.

Piedmont, R. L. (2004). Spiritual transcendence as a predictor of psychosocial outcome from an outpatient substance abuse program. *Psychology of Addictive Behaviors*, *18*(3), 213-222.

Richardson, L. P., McCauley, E., Grossman, D. C., McCarty, C. A., Richards, J., Russo, J. E., Rickhill, C., & Katon, W. (2010). Evaluation of the Patient Health Questionnaire (PHQ-9) for Detecting Major Depression among Adolescents. *Pediatrics, 126*(6), 1117-1123. doi: 10.1542/peds.2010-0852

Sanchez, E. G. M., Arocena, F. A. L., & Ceballos, J. C. M. (2010). Daily spiritual experience in Basques and Mexican: A quantitative study. *Journal of Transpersonal Research*, *2*, 10-25.

Sprecher, S., & Fehr, B. (2005). Compassionate love for close others and humanity. *Journal of Social and Personal Relationships*, *22*(5), 629-651. doi: 10.1177/0265407505056439

Tong, E. M. W. (2017). Spirituality and the Temporal Dynamics of Transcendental Positive Emotions. *Psychology of Religion and Spirituality, 9*(1), 70–81

Underwood, L. G. (2011). The daily spiritual experience scale: Overview and results. *Religions*, *2*, 29-50. doi: 10.3390/rel2010029

Underwood, L. G., & Teresi, J. A. (2002). The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, *2*(1), 11-49.

Van Dyke, C. J., Glenwick, D., Cecero, J., & Kim, S. K. (2009). The relationship of religious coping and spirituality to adjustment and psychological distress in urban early adolescents. *Mental Health Religion and Culture*, *12*, 369-383.

Van Schalkwyk, I., & Wissing, M. P. (2010). Psychosocial well-being in a group of South African Adolescents. *Journal of Psychology in Africa*, *20*(1), 53-60.

Wheeler, E. A., Ampadu, L. M., & Wangari, E. (2002). Lifespan development revised: African-cantered spiritualty throughout the life cycle. *Journal of Adult Development*, *9*(1), 71-78.

Winfield, T. (2013). The Seekers: Do Spiritual Practices Lead to a Sense of Well-being? *Journal of Personality and Social Psychology*, *84*, 377-389.

Wnuk, M., & Marcinkowski, J. T. (2014). Do Existential Variables Mediate Between Religious-Spiritual Facets of Functionality and Psychological Wellbeing. *Journal of Religion and Health*, *53*(1), 56-67.

Wood, A. M., Froh, J. J. & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*(7), 890-905.

Wood, A. M., Joseph, S., Llyod, J., & Atkins, S. (2009). Gratitude influences sleep through the mechanism of pre-sleep cognitions. *Journal of Psychosomatic Research*, 66, 43-48.

# CHAPTER 2

## THE MANUSCRIPT: VALIDATION OF THE DAILY SPIRITUAL EXPERIENCE SCALE FOR USE WITH SOUTH AFRICAN STUDENTS

**Keywords:** compassion, daily spiritual experience, gratitude, love, mental health, spirituality, spiritual well-being, transcendence, well-being

**Abstract**

Objective: The aim of this study was to validate the English version of the Daily Spiritual Experience Scale (DSES) in a group of N = 324 black South African students.

Method: Validation of the DSES was done by investigating its internal consistency, reliability, factorial validity and convergent and divergent validity.

Results: The DSES had reliability of 0.85, a unidimensional factor structure, and showed convergent validity by significantly correlating with the Mental Health Continuum and divergent validity by significantly correlating with the Patient Health Questionnaire.

Conclusions: The unidimensional 16-item DSES is valid for use in a South African black student context as a domain general measure of spiritual experience.

**Keywords:** compassion, daily spiritual experience, gratitude, love, mental health, spirituality, spiritual well-being, transcendence, well-being

Spirituality as a construct with different tenets has gained traction in the ever-widening field of positive psychology and well-being science, that aims to focus on supporting and encouraging positive internal resources by promoting subjective well-being and complete mental health (Seligman & Csikszentmihalyi, 2014). Spiritual well-being as a construct is continuously being theorised and clarified, initially within the realm of religiosity, but later in the realm of spirituality and spiritual well-being (Pargament, 2007) and as an important component of complete mental health. The aim of this study was to validate the Daily Spiritual Experience Scale (DSES) (Underwood & Teresi, 2002) in a South African student group. In order to fortify the concept of spiritual well-being, there needs to be validation of psychometric instruments that measure the construct, and that was what inspired the current research.

**Spirituality, Religiosity and Spiritual Well-being**

Spirituality as an overarching site of inquiry has generally fallen within the disciplines of philosophy and theology. Specifically, spirituality is often grouped with religiosity and placed within subjective well-being studies. However, spiritual well-being can rather be understood to fall within eudaimonic well-being that emphasises positive psychological functioning and meaning in life (Steger, Frazier, Oishi, & Kaler, 2006), gratitude, transcendence and compassionate love (Underwood & Teresi, 2002).

***Spirituality*** and the experience of spiritual phenomena are present in the lives of most people (Emmons, 2000; Jantos & Kiat, 2007; Moberg, 1971; Underwood, 2006, 2011). Some facets of spirituality are often latently prevalent in interventions focused on promoting well-being (Good & Willoughby, 2005; Piedmont, 1999; Underwood, 2011). The number of scientific studies that focus on spirituality have increased and from such studies it is evident that differences exist in conceptualising and operationalising the construct of spirituality. However, despite these differences the consensus is clear: spirituality plays an important positive role in enhancing individuals' well-being (Kalkstein & Tower, 2009; Moberg, 1971; Piedmont, 1999; Underwood, 2011; Underwood & Teresi, 2002). Emmons (2000) conceptualised spirituality as an intelligence with features, such as transcendence, heightened states of consciousness, being an individual virtue, sanctifying the mundane and as a source of problem-solving abilities in individuals. Wheeler, Ampadu, and Wangari (2002) further conceptualised spirituality as a social phenomenon, stating that spirituality is socially derived and inherently human, functioning as an internal psychosocial resource (Wheeler et al., 2002). Kalkstein and Tower (2009) therefore emphasised that any definition of spirituality

would have to be comprehensive and inclusive of context, practice, ritual, culture as well as various other individual factors.

***Religiosity and spiritual well-being.*** At present, the literature on the conceptual distinction between spirituality and religiosity overlaps to a great extent and research has found that spirituality and religiosity are statistically related (Dein, 2005; Hill et al., 2000). Hill et al. (2000) argued that a distinction between religiosity and spirituality should be approached with a deep understanding of the contextual overlap that exists in the nature and experience of spirituality and religiosity. Hill and Pargament (2003) cautioned against separating the two constructs because doing so could yield superficial understanding of these concepts in the normal day-to-day lives of individuals. Specifically, Piedmont (2004) stated that spirituality is an individual attribute and that religiosity is an institutional attribute. Good and Willoughby (2005) referred to spirituality as an individual's personal beliefs or intrinsic commitment to such beliefs. Spirituality seems to be more inclusive in understanding the phenomenon of searching for the sacred, whereas religion refers to a search that is based specifically in traditional religious contexts and religious institutions. Spirituality and religiosity both comprise of a need to relate to a higher transcendent being or deity and oftentimes require an ability to transcend the self (Paloutzian & Park, 2005). Spirituality is concerned with the transcendent and in addressing issues related to worldview and the meaning of life, it is possible to be spiritual while not being religious (Good & Willoughby, 2005; Underwood & Teresi, 2002). In a study that investigated the relationship between spiritual experience and well-being, Sanchez, Arocena, and Ceballos (2010) found that those who were identified as atheist or agnostics, reported a higher frequency of spiritual experience. However, it is important to keep in mind that for most people, spirituality is often experienced within religious contexts (Hill & Pargament, 2003).

Spiritual well-being is viewed as the perceived life-long presence (Moberg, 1984) and experience of transcendence, gratitude and compassionate love in individuals' lives (Underwood, 2011). The prominent role of spiritual well-being, transcendence and daily spiritual experience in general health and wellness has been alluded to by previous research on spirituality (Moberg, 1971, 1984; Emmons, 2000; Jantos & Kiat, 2007; Underwood, 2011). Spiritual well-being has been found as a predictor of positive outcomes such as better performance of health behaviours and lowered alcohol intake (Kalkstein & Tower, 2009; Underwood, 2011), positive psychological adjustment (Van Dyke, Glenwick, Cecero, & Kim, 2009) decreased psychopathology (Kalkstein & Tower, 2009), decreased familial conflict

(Kwon, 2008) and improved relational well-being (Kalkstein & Tower, 2009). Spiritual well-being plays an important role in encouraging adaptive behaviour (Kalkstein & Tower, 2009; Underwood, 2011).

**The measurement of spiritual well-being**

Traditionally, spiritual well-being has been measured along with religiosity or religious affiliation and participation. It is important to focus on spiritual well-being because it is increasingly found to be important for overall well-being. Some of the scales that measure spirituality are: The Spiritual Experience Index (SEI) that measures faith and the spiritual journey (Genia, 1991, 1997), the Spiritual Well-being Scale (SWBS) that focuses on perceived states of religiosity and existential well-being (Paloutzian & Ellison, 1982) and the Spiritual Health and Life-Orientation Measure (SHALOM) (Fisher, 2010, 2016) that aims to measure spiritual health or well-being by assessing quality of intra and interpersonal relationships. The SHALOM also assesses individuals' relationships with their immediate and extended socio-spiritual environments, including a relationship with a higher supernatural being (Fisher, 2010, 2016).

There are quite a few psychometric instruments that specifically focus on examining the relationships between spirituality and psychological constructs. For example, between a daily spiritual experience and temporal changes (George & Park, 2013; Tong, 2017), alcohol abuse (Churakova, Burlaka, & Parker, 2017), meaning in life amongst people in different contexts (George & Park, 2017; Meng & Dillon, 2014; Wnuk & Marcinkowski, 2014) as well as positive coping strategies such as managing burnout, life satisfaction, well-being and prosocial behaviours (Underwood & Teresi, 2002; Underwood, 2011). The Daily Spiritual Experience Scale (DSES) has been used in various contexts and was consistently found to have a positive relationship with psychological adjustment (Underwood, 2006, 2011) and a negative relationship with maladaptive social behaviours (Lee, Veta, Johnson, & Pagano, 2014). The Daily Spiritual Experience (DSE), operationalised as the DSES is central in this study and will be investigated along with complete mental health.

***Daily Spiritual Experience.*** The DSE construct was conceptualised as part of understanding the non-religious spiritually-rooted experiences of individuals in healthcare settings, as well as the spiritual experience in the day-to-day lives of individuals in these settings (Underwood, 2006). DSE considers individuals' perception of the transcendent in their day-to-day lives, with the focus on being spiritual and experiencing spirituality rather than religion or theistic

affiliation and ritual (Underwood & Teresi, 2002). There are three important components of the DSE construct, namely: gratitude, transcendence and compassionate love. These aspects are described as follows.

*Gratitude* is a state of appreciation for having received help which is perceived to be of great value (Wood, Froh, & Geraghty, 2010) and is accompanied by feelings of appreciation when experiencing altruistic deeds and helpfulness (Froh et.al, 2009). Gratitude can be directed inwards, towards objects, the metaphysical and especially towards the spiritual. A trait level positive life orientation (Wood, Joseph, Llyod, & Atkins, 2009; Froh et.al, 2009) and increased well-being, are features of gratitude (Winfield, 2013).

*Transcendence* is a core component of spirituality (Emmons, 2000) and spiritual well-being. Transcendence is inherent in individuals and is the sense of experiencing divinity or the divine. Transcendence can act as a source of motivation or innate need that influences behaviour (Piedmont, 1999, 2004). Kwon (2008) however, warned that seeking to continuously experience transcendence may lead an individual to not being able to deal with their current reality.

*Compassionate love* is an altruistic love that extends to humanity in general and is defined as "a type of love that can be experienced for a variety of others, including all of humankind" (Sprecher & Fehr, 2005, p. 630).

From the theory of DSE the DSES was developed. In the initial validation study, Underwood and Teresi (2002) found that among an American sample, the DSES had good construct validity when correlated with health and quality of life variables, a finding that was supported by research done by Kalkstein and Tower (2009). The unidimensional DSES scale has been translated into various languages and validated in a number of populations all over the world (Underwood, 2011).

Since spiritual well-being and specifically the phenomenon of daily spiritual experience has been extensively associated with features of psychosocial well-being and general health as well as healthy lifestyles, it was decided to investigate the DSES in this validation study, in association with the construct of complete mental health.

**Complete Mental Health**

Complete mental health has become central to health and well-being discourse and policy. In its definition of overall health, the World Health Organization's (WHO) includes complete mental health and social well-being as core indicators of general health and well-being. An

individual is considered to have complete mental health when they are physically, mentally and socially well. Therefore, there should be a presence of health and not merely an absence of illness (WHO, 2007). Healthy individuals have agency and internal resources to manage and cope with daily stressors and can contribute productively and meaningfully to their communities (WHO, 2007). A recent conceptualisation of complete mental health is the one proposed by Galderisi, Heinz, Kastrup, Beezhold, and Sartorius (2017) that mental health is a dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of society. The authors explain that basic cognitive and social skills, the ability to recognise, express and regulate one's own emotions, as well as empathise with others, flexibility and an ability to cope with challenging life events and to function in social roles and harmonious relationship between body and mind, represent important components of mental health which contribute to varying degrees to the state of internal equilibrium (2017, p. 408). This conceptualisation by Galderisi et al. (2017) provides an elaboration of the WHO definition.

The complete mental health construct can be attributed to the work of Corey Keyes (2014) who, after extensive research concluded that complete mental health includes emotional, psychological and social well-being, characterised by positive feelings (e.g. happiness, satisfaction), positive attitudes towards one's own responsibilities and towards others, and positive social functioning (e.g. social integration, actualisation and coherence). According to Keyes (2002), complete mental health manifests on a continuum (MHC) of functioning ranging from flourishing or feeling and functioning well, to languishing or feeling and functioning un-well. The complete mental health theory was operationalised by the Mental Health Continuum Scale, that is currently one of the most frequently used measurements of constructs, such as flourishing, optimal mental health, psychological well-being and more (Khumalo, Wissing, & Schutte, 2014).

**Measurement in Different Cultural Contexts**

Valid and reliable measuring instruments cannot be assumed to be appropriate in all contexts or across populations. Common knowledge in one culture may be uncommon to another, even the meaning of well-known concepts may differ between cultures. This is an important consideration when using psychometric instruments because scale items may operate differently across various groups (De Kock, Kanjee, & Roodt, 2013) which could result in item bias. Therefore, measuring instruments should be validated for the populations for which they will be used (Cromhout, 2015) in order for implicit bias and language barriers to be

reduced. Such validation ensures fairness and cultural 'fit' of measurements (De Kock et al., 2013; Foxcroft & Roodt, 2009).

Given the necessity of ensuring the fit, reliability and validity of measurements across cultures, scale validation should be carried out before the general use of an instrument. Such scale validation includes testing the psychometric properties of the scale within the context where it is intended for use. In this study, the focus for validation purposes was on the internal consistency reliability, the factorial, convergent and divergent validity of the DSES in a South African university student context.

**The Present Study: Research Questions and Aims**

From the literature exploration done, a research question that emerged was: Could the DSES be validated in a group of black South African students?

The aim of this study was therefore to validate the DSES in a black South African student group. The objectives were to investigate (1) the internal consistency reliability of the DSES, the (2) factorial validity of the DSES, and the (3) convergent and divergent validity of the DSES within a black South African student population.

The assumptions that this study investigated were that the following psychometric properties hold for the English version of the DSES in the proposed South African sample: (1) the DSES is unidimensional, (2) the DSES shows sufficient internal consistency reliability, (3) the DSES has medium to high positive correlations with other well-being scales, such as the Mental Health Continuum Short Form (MHC-SF), and (4) the DSES has negative correlations with a scale measuring negative affect, such as the Patient Health Questionnaire-9 (PHQ-9). To the best of the researcher's knowledge, no other studies on the validation of the DSES in South Africa exist. This study will therefore address the gap regarding the validation of the English version of the DSES for use within a South African context. Possible contributions of the study include evaluating the psychometric properties of the English version of the DSES with specific reference to the South African context and determining whether the scale is valid and reliable for use in a South African young adult group fluent in English. Validated versions of the scale have the potential to be used in research about spirituality and spiritual well-being, as well as overall well-being where brief scales are required.

## Methodology

### Research design and participants

This study followed a quantitative approach from the positivist paradigm whose ontology is that truth is observable and measurable (Creswell, 2013; Frels & Onwuegbuzie, 2013). A quantitative cross-sectional design, where data is collected only once, was applied. Data for this study was collected from black students at a South African university using licensed online survey software. Student participants were given a survey link and they completed the survey in their own time within a set submission deadline. The sample (shown in Table 1) consisted of N=324 participants who were between 18 and 44 years of age (male=140; female=184; mean=1.57; SD=0.50) and enrolled in different courses at different levels of study (undergraduate=67.9%; postgraduate=32.1%). All survey items were in English as it is the language of teaching and learning at this university. Only a small proportion (7.4%) of the participants indicated English as a first language.

**Table 1:** Summary of participant demographic statistics

| | | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| **Gender** | | | | |
| **Male** | | 140 | 43.2 | 43.2 |
| **Female** | | 184 | 56.8 | 100.0 |
| **Total** | | 324 | 100.0 | |
| **Population group** | | | | |
| **Black** | | 319 | 98.5 | 98.8 |
| **Coloured** | | 4 | 1.2 | 100.0 |
| **Total** | | 323 | 99.7 | |
| **Missing** | | 1 | 0.3 | |
| **System Total** | | 324 | 100.0 | |
| **Religious affiliation** | | | | |
| **Valid** | **Christian** | 295 | 91.0 | 91.0 |
| | **Islam** | 2 | 0.6 | 91.7 |
| | **Atheist** | 1 | 0.3 | 92.0 |
| | **None** | 24 | 7.4 | 99.4 |
| | **Rastafarian** | 2 | 0.6 | 100.0 |
| | **Total** | 324 | 100.0 | |

**Data collection**

Data collection in this study was obtained through a biographical questionnaire about their gender, population group, and religious affiliations, as well as the following validated questionnaires: The Daily Spiritual Experience Scale (DSES) (Underwood & Teresi, 2002), Mental Health Continuum – Short Form (MHC-SF) (Keyes, 2002, 2006; Keyes et al., 2008) and the Patient health questionnaire (PHQ-9) (Kroenke, Spitzer, & Williams, 2001). Each of these scales are available for use in the public domain.

*Daily Spiritual Experience Scale (DSES).* The DSES of Underwood and Teresi (2002) is a 16-item scale measuring daily spiritual experience (DSE). The DSES has only one factor that taps into dimensions of spirituality such as mercy, gratitude, awe and a sense of connection with the transcendent including feeling compassionate love. Participants are asked to indicate how often they have experienced an item and leeway is given to participants who do not identify with a deity. Participants are encouraged to substitute another word that calls to mind the divine or holy for them (Underwood & Teresi, 2002). The DSES has a Likert-type scale ranging from: *Many times a day,* to *Never*. The last item differs from the other items as it ranges from: *Not at all,* to *As close as possible*, where the item enquires about a more general experience of spirituality: *In general, how close you feel to God*. This unidimensional scale has been validated in several populations globally (Underwood, 2011). In a Chinese group, a translated DSES was found to be valid and reliable (Cronbach alpha was 0.97) (Ng et al., 2009) and in a Brazilian sample, the scale was found to have temporal stability (Kimura et al., 2012). In a review of the use of the scale, Underwood (2011) found evidence of good psychometric properties and internal consistency with high validity and reliability scores (Cronbach alpha above 0.90). The DSES has been found to have good construct validity when correlated with measures of positive well-being, as was reported by Underwood and Teresi (2002), as well as in later research by Kalkstein and Tower (2009). The DSES has not been used for research in the South African context.

*Mental Health Continuum Short Form (MHC-SF).* The MHC-SF developed by Keyes (1998, 2002, 2006) is a 14-item questionnaire measuring positive mental health. It has a three-dimensional factor structure which consists of emotional well-being (EWB, 3 items), psychological well-being (PWB, 6 items) and social well-being (SWB, 5 items). Participants are asked to indicate how often they have had a particular experience during the last four weeks and respond on a Likert-scale ranging from 0 (*never*) to 5 (*every day*). Items include: *During the past month, how often did you feel happy?* (EWB), *During the past month, how*

*often did you feel that people are basically good?* (SWB), and *During the past month, how often did you feel your life has a sense of direction or meaning to it?* (PWB). This three-dimensional factor structure has been confirmed in multiple countries across the world, including the United States of America (Keyes, 2002), the Netherlands (Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011) and South Africa (Keyes et al., 2008). The MHC-SF has been found to be reliable (0.57 and 0.71) with adequate construct validity (Keyes, 2002, 2006). Lamers et al. (2011) found that among a Dutch sample, the MHC-SF had high test-retest reliability over time (averaging 0.68 at 12 weeks and 0.65 at 40 weeks). Specifically, in relation to the context of this study, the MHC-SF has been validated and found reliable (reliability score of 0.74) and valid in a South African youth population (Keyes et al., 2008). The three subscales of the MHC-SF have shown positive correlations with other measures of positive mental health such as improved health, improved social interaction and overall improved adaptive behaviour (Liang, Tracy, Kenny, Brogan, & Gatha, 2010).

*Patient Health Questionnaire-9 (PHQ-9).* The Patient Health Questionnaire (PHQ-9) developed by Kroenke et al. (2001), is a 9-item scale used to assess symptoms of depression and other mental illnesses encountered in healthcare settings. The scale is unidimensional and measures symptoms of depression according to nine criteria of the Diagnostic and Statistical Manual IV (DSM-IV). Along with these nine items, the PHQ-9 has an additional item that evaluates the influence of depression experienced in everyday life. To measure intensity and prevalence of symptoms for each of the nine items, participants indicate how often each symptom has occurred in the past two weeks on a Likert-scale ranging from 0 (*not at all*) to 3 (*nearly every day*). Symptoms include: *Trouble falling or staying asleep, or sleeping too much*; *Poor appetite or overeating* and *Trouble concentrating on things, such as reading the newspaper or watching television*. The PHQ-9 had an internal consistency reliability of 0.89 and 0.86 in the initial validation studies (Kroenke et al., 2001) and has been validated for use in different contexts, including predominantly African populations (Adewuya, Ola, & Afolabi, 2006; Richardson, McCauley, & Grossman, 2010). Adewuya et al., (2006) validated the PHQ-9 for use among Nigerian students, where the test-retest reliability indices of the PHQ-9 have been found consistently to be above 0.65 (Adewuya et al., 2006; Kroenke et al., 2001; Richardson et al., 2010). The PHQ-9 has also been used in South African research by Botha (2011), Cromhout (2015) and Smith (2018), who all reported high reliability for the scale.

## Procedure and ethical considerations

This study forms part of a Master of Arts degree in Applied Positive Psychology and was conducted with adherence to the high ethical principles required by NWU and as stipulated by the Basic and Sciences Research Ethics Committee (BaSSREC), from which ethical clearance for the research was given with project number: NWU-HS-2017-0145.

Participants were students at a South African university and the authorities at the university's research division as well as in academic departments gave permission for and were the gatekeepers who facilitated participant recruitment. Lecturers acted as recruiters and invited students to participate. A brief introduction to the research was done and then students were guided to a survey link where they found a comprehensive explanation of the research, ethical principles involved, their rights as participants and guidelines for their participation. Participants gave consent by clicking 'yes' after reading the informed consent letter, thus they could click 'yes' to participate (giving consent) in the survey or they could click 'no' to decline participation (declining consent). This study done was online using QuestionPro™, therefore there was no face-to-face interaction with participants and participation was voluntary. No reference was made in which participants in this study could be personally identified and the data obtained was used for scientific research and publication purposes only. This study offered no incentives or reward for participation. No negative outcomes were expected or experienced from participating in this study, though support was offered to any participant who indicated a need for it. Such assistance involved references to the university's student support services.

## Data analysis

All data was analysed in four stages using the Mplus Version 8.2 statistical analysis software program (Muthén & Muthén, 1998-2017). Descriptive statistics were calculated and confirmatory factor analysis was done to establish factorial validity and internal consistency reliability. Convergent validity was established by correlation patterns between the scores of the DSES and the subscales of the MHC-SF (EWB, PWB, SWB). Divergent validity was established by correlation with a depression measure (PHQ-9). Data analyses will be further described in the discussion of the research results.

## Results

The aim of this study was to validate the English version of the DSES in a black South African student sample, by investigating the validity and reliability of the scale. Objectives

set with which to reach the aim, were to investigate: the internal consistency reliability of the DSES, the factorial validity of the DSES, and lastly the convergent and divergent validity of the DSES. Below the results of the validation study of the DSES are given and the discussion thereof will follow.

**Descriptive statistics, reliabilities and correlations**

In Table 2a, descriptive statistics, reliabilities and correlations for *convergent validity* of the DSES are given while in Table 2b, as well as descriptive statistics, reliabilities and correlations for *divergent validity* of the DSES are provided. SPSS 25 (IBM Corporation, 2017) was used to calculate means and standard deviations, while MPlus 8.2 (Muthén & Muthén, 1998-2017) was utilised for all other analyses.

The mean scores of scales and sub-scales ranged between 2.53 for MHC-SWB and 3.85 for MHC-PWB, with standard deviations of 0.61 for the PHQ ranging to 1.08 for MHC-SWB (see Tables 2a and 2b). These indices compared well with those reported in literature for the DSES, the MHC-SF and the PHQ9 (Keyes, 2002, 2006; Keyes et al., 2008; Kroenke et al., 2001, Underwood, 2011)

**Table 2a:** Descriptive statistics, reliabilities and correlations for convergent validity

| Variable | M | SD | ρ | *Corr (DSES)* |
|---|---|---|---|---|
| DSES | 3.63 | 0.62 | 0.85 | 1.00 |
| MHC-SF - Complete | 3.31 | 0.77 | 0.84 | 0.32†** |
| MHC-SF - Emotional well-being | 3.52 | 1.04 | 0.74 | 0.23** |
| MHC-SF - Psychological well-being | 3.85 | 0.82 | 0.76 | 0.30** |
| MHC-SF - Social well-being | 2.53 | 1.08 | 0.74 | 0.16* |

*p < 0.05 **p < 0.01 †r > 0.30 = medium practical affect

**Table 2b:** Descriptive statistics, reliabilities and correlations for divergent validity

| Variable | M | SD | ρ | *corr(DSES)* |
|---|---|---|---|---|
| DSES | 3.63 | 0.62 | 0.85 | 1.00 |
| PHQ | 2.00 | 0.61 | 0.81 | -0.02 |

*Internal consistency reliability of the DSES*, calculated with MPlus 8.2, is a composite reliability value with the same preferred cut-off values as Cronbach's alpha (0.70) (Muthén & Muthén, 1998-2017). Therefore, as shown in Tables 2a and 2b, the reported reliability indices (ρ) for the DSES, the MHC-scales and the PHQ, that were between 0.74 (MHC-EWB) and 0.85 (DSES), could be considered as acceptable (Raykov, 2009).

**Factor structure of the DSES**

The factor structure of the DSES as depicted in Table 3b, was verified by means of MPlus 8.2 (Muthén & Muthén, 1998-2017) using confirmatory factor analysis (CFA, see Table 3a).

**Table 3a:** Confirmatory factor analysis results - DSES

| Factor | Item | Standardised estimate | Standard error | *p* | |
|---|---|---|---|---|---|
| DSES | 1 | 0,54 | 0,05 | 0,00 | |
| | 2 | 0,35 | 0,05 | 0,00 | |
| | 3 | 0,62 | 0,04 | 0,00 | |
| | 4 | 0,70 | 0,04 | 0,00 | |
| | 5 | 0,66 | 0,04 | 0,00 | |
| | 6 | 0,54 | 0,05 | 0,00 | |
| | 7 | 0,63 | 0,05 | 0,00 | |
| | 8 | 0,73 | 0,04 | 0,00 | |
| | 9 | 0,73 | 0,04 | 0,00 | |
| | 10 | 0,48 | 0,06 | 0,00 | |
| | 11 | 0,38 | 0,06 | 0,00 | |
| | 12 | 0,55 | 0,05 | 0,00 | |
| | 13 | 0,23 | 0,06 | 0,00 | |
| | 14 | 0,14 | 0,06 | 0,03 | |
| | 15 | 0,59 | 0,05 | 0,00 | |
| | 16 | 0,54 | 0,05 | 0,00 | |
| Error variances allowed to correlate | | | DSES 1 with DSES 2 | | (MI = 23.82) |
| | | | DSES 4 with DSES 5 | | (MI = 70.94) |
| | | | DSES 10 with DSES 11 | | (MI = 23.65) |

The robust maximum likelihood (MLR) estimator was used due to skewness and kurtosis present in the data. To determine fit, the following indices were reported: $\chi^2$ with its associated degrees of freedom; the MLR-adjusted $\chi^2$; the comparative fit index (CFI) and the Tucker-Lewis index (TLI), both with values >0.90 indicating acceptable fit; the root mean square error of approximation (RMSEA), for which 0.05 – 0.08 is seen as a range of excellent to acceptable fit; and the standard root mean square residual (SRMR), with less than 0.08 indicating a good fit (Wang & Wang, 2012).

**Table 3b:** Fit statistics of confirmatory factor analysis of DSES

| **Model** | **$\chi^2$** | ***df*** | **MLR-adjusted $\chi$2** | **CFI** | **TLI** | **RMSEA** | **SRMR** |
|---|---|---|---|---|---|---|---|
| **DSES** | 204.01 | 101 | 251.92 | 0.92 | 0.90 | 0.06 | 0.05 |

$\chi^2$ = Chi-square; *df* = degrees of freedom; MLR = Maximum Likelihood (Robust) estimator; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual

Table 3b displays these fit values that indicate a good statistical fit and confirms the unidimensional factor structure of the DSES as proposed by Underwood and Teresi (2002).

**Convergent and divergent validity of the DSES**

*Convergent validity*. A measurement model containing only the DSES items and the MHC-SF items (EWB, SWB and PWB combined into a MHC second order latent variable) was specified to check for model fit. It was found that items 13 and 14 of the DSES and item 4 of the MHC-SF had low factor loadings (<0.35), and the error variances of DSES 13 and MHC 4 showed a high modification index. The three items were removed from further analyses due to these issues. Error variances were, however, allowed to correlate between DSES 1 and 2, DSES 4 and 5, DSES 10 and 11, and MHC 11 and 14. The developed measurement model (see Table 4a) showed good fit and a significant correlation of 0.32** (see Table 2a), between the DSES-factor and the MHC-factor, proving convergent validity of the DSES.

The process was repeated, but with EWB, SWB, and PWB specified without a MHC second order latent variable. This was done in order to determine possible convergent validity between the DSES and the three factors (EWB, PWB, SWB) underlying a total well-being score. The same items were removed, and the same error variances allowed to correlate. The model showed good statistical fit. Significant correlations (see Table 2a) were found between the DSES-factor and the three separate factors of the MHC, further confirming convergent validity, even though SWB showed a correlation at a lower level of significance ($p<0.05$) than EWB and PWB ($p<0.01$). Table 4a shows the fit statistics of the measurement models for convergent validity, where model 1 represents the measurement model including the second-order latent variable, MHC, and model 2 the measurement model with the three latent variables (EWB, PWB, SWB) specified separately.

**Table 4a:** Fit statistics of measurement models for convergent validity

| Model | $\chi^2$ | *df* | MLR-adjusted $\chi^2$ | AIC | BIC | CFI | TLI | RMSEA | SRMR |
|---|---|---|---|---|---|---|---|---|---|
| **Model 1** | 527,22 | 316 | 605,67 | 25142,14 | 25478,35 | 0,91 | 0,90 | 0,05 | 0,06 |
| **Model 2** | 524,26 | 314 | 602,69 | 25143,18 | 25486,94 | 0,91 | 0,90 | 0,05 | 0,06 |

**Table 4b:** Fit statistics of measurement model for divergent validity

| Model | $\chi^2$ | *df* | MLR-adjusted $\chi^2$ | AIC | BIC | CFI | TLI | RMSEA | SRMR |
|---|---|---|---|---|---|---|---|---|---|
| **Model 3** | 390,62 | 224 | 439,10 | 19266,21 | 19549,53 | 0,92 | 0,90 | 0,05 | 0,06 |

$\chi^2$ = chi-square; *df* = degrees of freedom; MLR = Maximum Likelihood (Robust) estimator; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual

*Divergent validity.* A measurement model containing the DSES and PHQ one-factor structures was specified to determine model fit (see Table 4b). As before, DSES items 13 and 14 were removed to determine divergent validity. The same error variances for the DSES items were allowed to correlate (DSES 1 and 2, DSES 4 and 5, and DSES 10 and 11). No PHQ items proved problematic, but two error variances were also allowed to correlate (PHQ 3 and 4, and PHQ 6 and 9). The subsequent measurement model showed good fit, as well as a non-significant correlation (close to 0.00) between the DSES-factor and the PHQ-factor, confirming the divergent validity of the DSES.

**Discussion**

This study aimed to validate the English version of the DSES for use in a black South African student sample. The main finding was that the unidimensional 16-item DSES had good psychometric properties and therefore met the criteria for validation in this group of black South African students. The results in line with the objectives will be discussed next.

The first objective was to determine the internal consistency reliability of the DSES. It was found that the scale in this study had a p-value of 0.85 which is comparable to a Cronbach alpha value and could be considered as good (Raykov, 2009). This finding corresponds to reliability indices found by Underwood and Teresi (2002, 2011) ranging from 0.91 to 0.95 in three validation studies of the DSES.

The second objective was to calculate the factorial validity of the DSES. The one factor model of the 16-item DSES showed good statistical fit with data from this group of participants and supported the factor structure intended by Underwood and Teresi (2002) who developed the DSES. The single factor structure of the DSES has been translated (Ng et al., 2009) and used in various populations and contexts (Kimura et al., 2012; Underwood 2011).

The third objective was to determine the convergent and divergent validity of the DSES. The scale had significant positive correlations with a measure of complete mental health, namely the MHC and its subscales for emotional well-being, psychological well-being and social well-being. The DSES also had no (nil) significant correlations with a measure of symptoms of pathology, namely the PHQ-9. These findings respectively clearly indicated the convergent and divergent validity of the DSES in this research and correspond with those of Kimura et al. (2012) Ng et al. (2009) and Underwood (2011).

From the above, it is evident that data obtained from the sample of African young adults (students) in this research, showed acceptable statistical fit for the unidimensional factor structure proposed for the DSES by its authors (Underwood & Teresi, 2002). The internal consistency of the DSES is high and the measurement models indicating both convergent and divergent validity of the DSES, had good statistical fit. This study thus met its objectives and showed that the DSES could be used with reliability and validity in a group of black South African students or young adults.

The significantly positive correlations of the DSES with the MHC-complete (which is also of medium practical effect) and with the subscales measuring emotional, psychological and social well-being seem to indicate the relevance of the daily spiritual experience construct in the fields of psychological, spiritual, and relational well-being (Wheeler et al., 2009; Khumalo et al., 2014).

In the scientific field of positive psychology, the theoretical and empirical associations between spiritual well-being (including religious well-being), positive mental health and many constructs of intra-personal or psychological well-being have been established for example, with hope (Herth, 2001), with meaning in life (Khumalo et al., 2014) and with character strengths, amongst others (Park & Slattery, 2013; Steger, 2012). The finding of this study, that the DSES significantly positively correlates with psychological well-being implies that in this group of African youth, spiritual well-being contributes to them experiencing self-acceptance, positive inter-personal relations, autonomy, environmental mastery and personal growth. Different dimensions of spirituality and making use of different pathways can result in different psychological well-being outcomes. Such mechanisms by means of which spirituality leads to well-being would explain the dynamic interrelatedness of spirituality and well-being (Khumalo et al., 2014). Khumalo et al. (2014) found that meaning in life is one such factor that could explain the beneficial influence of spirituality on psychological well-being. Aspects such as hope, satisfaction with life, quality of life and perceived social support

have also been found as mediating factors in the spirituality-well-being relationship (Park, 2007; Steffen, 2012; Underwood, 2011).

The DSES also correlated significantly positively in this study with emotional well-being or the feeling good component of the MHC. Ciarrocchi and Deneke (2005) found that a daily spiritual experience (DSE) was linked to improved emotional health of prisoners and Counted, Possamai and Meade (2018), in a review study, found that spirituality is beneficial for emotional well-being, because it acts as an internal locus of control in emotional regulation. Wheeler et al. (2002) argued convincingly about the role of spirituality in emotional development throughout the life span of the African individual and about the necessity of spirituality and especially daily spiritual experience.

Furthermore, the DSES had a significant positive correlation with social well-being as a component of complete mental health (MHC) in this study. This implied that in this group of African students, their spiritual wellness in the form of daily spiritual experience contributed to them experiencing social coherence, actualisation, integration, acceptance and social contribution (Keyes, 2006). Philosophically, this is confirmed by the views of Wheeler et al. (2002) who place spirituality in the centre of the collective (socially bounded) worldview of African people. According to their view, spirituality "tells the individual that s/he exists in and because of community" (p. 77). Through this awareness of their social connectedness, the individual has confidence in themselves and they have the courage to conduct themselves in the community. In empirical research, Underwood (2002) found spirituality to be associated with perceived social support and Kassin, Fein, and Markus (2014) cited research indicating socially constructed religious rituals that provide "a community lifeline of social support to prevent isolation and promote a safe and healthy way of life" (p. 602). Spirituality seemingly also works through features such as hope (Herth, 2001) and optimism (Pargament & Mahoney, 2009), towards social well-being.

The relationship between spirituality and positive mental health reported above, was succinctly captured by Ellison (1983, p. 332) in saying that "if we are spiritually healthy we will feel generally alive, purposeful, and fulfilled, but only to the extent that we are psychologically healthy as well".

Finally, although the DSES in this study had no correlation with a measure of pathology including symptoms of mood disorders, it could be noted that daily spiritual experiences are often included in interventions to alleviate mood disorders such as depression

and anxiety (Mofidi et al., 2006; Underwood, 2011). Follow up research on such interventions showed the positive effect of DSE on mood disorders (Mofidi et al., 2006; Han & Richardson, 2010) and on physical conditions (Koenig, George, & Titus, 2004; Blumenthal et al., 2007; Fombuena et al., 2016).

Above, the findings of this study to validate the DSES for use with a group of black South African students, were discussed and it was clear that the scale was valid for use in such a research context. However, there were some limitations.

**Limitations and Recommendations**

This study employed a cross-sectional survey design using a nonprobability sampling method. This may limit the generalisability of the findings of this study. Future research could be geared towards research of the DSES in South Africa, outside of a university student context.

This study was conducted in English among a group of predominantly Sesotho speaking participants, which meant that only participants who were fluent in the English language could participate. In future research, such measures could be translated so that participants can participate in their mother tongue. This may lead to more fitting psychometric instruments for research and interventions.

Although this study validating the DSES performed well and showed good psychometric properties, further research could be done over a period of time in order to investigate temporal changes as well as psychometric stability over time.

**Conclusion**

Spiritual well-being is gaining traction as an important part of well-being and it is therefore important that measuring instruments for it are valid and reliable. This current study aimed to investigate the psychometric properties of the DSES in a black South African student context, by investigating the internal consistency reliability and the criterion-related validity of the DSES. The scale has met validity criteria and proved to be psychometrically sound for research in a South African context. This indicates that the DSES is of general use in the current context as a domain-general measure of spiritual experience in daily life and can be recommended for further research in spiritual or well-being studies.

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**References**


Adewuya, A. O., Ola, B. A., & Afolabi, O. O. (2006). Validity of the patient health questionnaire (PHQ-9) as a screening tool for depression amongst Nigerian university students. *Journal of Affective Disorders, 96*(1), 89-93.

Blumenthal, J. A., Babyak, M. A., Doraiswamy, P. M., Watkins, L., Hoffman, B. M., Barbour, K. A., Herman, S., Craighead, E., Brosse, A.L., Waugh, R., & Hinderliter, A. (2007). Exercise and pharmacotherapy in the treatment of major depressive disorder. *Psychosomatic medicine*, *69*(7), 587.

Botha, M. N. (2011). Validation of the Patient Health Questionnaire (PHQ-9) in an African context. (Master's dissertation). North-West University, Potchefstroom. Retrieved from http://dspace.nwu.ac.za/handle/10394/4647

Churakova, I., Burlaka, V., & Parker, T. W. (2017). Relationship between alcohol use, spirituality, and coping. *International Journal of Mental Health and Addiction*. doi.org/10.1007/s11469-017-9759-6

Ciarrocchi, J. W., & Deneke, E. (2005). Hope, optimism, pessimism, and spirituality as predictors of well-being controlling for personality. *Research in the Social Scientific Study of Religion*, *16*, 161-184.

Counted, V., Possamai, A., & Meade, T. (2018). Relational spirituality and quality of life 2007 to 2017: an integrative research. *Quality of Life Outcomes*, *16*(75), 1-18. doi:10.1186/s12955-018-0895-x

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. California: Sage publications.

Cromhout, A. (2015). Validation of the Basic Psychological Needs Scale in a South African student group. (Master's dissertation). North-West University, Potchefstroom. Retrieved from https://repository.nwu.ac.za/handle/10394/17596

De Kock, F., Kanjee, A., & Roodt, G. (2013). Cross cultural test adaptation and translation. In C. Foxcroft, & G. Roodt (Eds.), *Introduction to psychological assessment in the South African context* (4th ed., pp. 83-106). Johannesburg: Oxford University Press.

Dein, S. (2005). Spirituality, psychiatry, and participation: A cultural analysis. *Transcultural Psychiatry*, *42*, 526-544.

Ellison, C. W. (1983). Spiritual well-being: Conceptualisation and measurement. *Journal of Psychology and Theology*, *11*(4), 330–340.

Emmons, R. A. (2000). Is Spirituality an Intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion*, *10*(1), 3-26. doi: 10.1207/S15327582IJPR1001_2

Fisher, J. (2010). Development and application of a spiritual well-being questionnaire called SHALOM. *Religions*, *1*, 105-121.

Fisher, J. (2016). Selecting the Best Version of SHALOM to Assess Spiritual Well-Being. *Religions*, *7*(45). doi: 10.3390/rel7050045

Fombuena, M., Galiana, L., Barreto, P., Oliver, A., Pascual, A., & Soto-Rubio, A. (2016). Spirituality in patients with advanced illness: The role of symptom control, resilience and social network. *Journal of Health Psychology*, *21*(12), 2765-2774.

Foxcroft, C., & Roodt, G. (2009). *Introduction to psychological assessment in the South African context*. Johannesburg: Oxford University Press.

Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering questionnaire instruments with qualitative interviews: A mixed research approach. *Journal of Counselling and Development*, *91*, 184-194.

Froh, J. J., Kashdan, T. B., Ozimkowski, K. M., & Miller, N. (2009). Who benefits from a gratitude intervention in children and adolescent? Examining positive affect as a moderator. *The Journal of Positive Psychology*, *4*(5), 408-422.

Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2017). A proposed new definition of mental health. *Psychiatria Polska*, *51*, 407-411. doi 10.12740/PP/74145

Genia, V. (1991). The spiritual experience index: A measure of spiritual maturity. *Journal of Religion and Health*, *30*(4), 337-347.

Genia, V. (1997). The spiritual experience index: revision and reformulation. *Review of Religions Research*, *38*, 344-361.

George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *The Journal of Positive Psychology*, *8*(5), 365-375. doi.org/10.1080/17439760.2013.805801

Good, M., & Willoughby, T. (2005). The role of spirituality versus religiosity in adolescent psychosocial adjustment. *Journal of Youth and Adolescence*, *35*(1), 41-55.

Han, J., & Richardson, V. E. (2010). The relationship between depression and loneliness among homebound older persons: Does spirituality moderate this relationship? *Journal of Religion & Spirituality in Social Work: Social Thought*, *29*(3), 218-236.

Herth, K. A. (2001). Development and implementation of a hope intervention program. *Oncology Nursing Forum*, *28*, 1009-1016.

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualizing and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, *58*(1), 64-74.

Hill, P. C., Pargament, K. I., Hood, R.W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour*, *30*(1), 52-77.

IBM Corporation. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.

Jantos, M., & Kiat, H. (2007). Prayers as medicine: How much have we learned? *Medical Journal of Australia*, *186*(10), 51-53.

Kalkstein, S., & Tower, R. B. (2009). The daily spiritual experiences scale and well-being: Demographic comparisons and scale validation with older Jewish adults and a diverse internet sample. *Journal of Religion and Health*, *48*, 402-417. doi 10.1007/s10943-008-9203-0

Kassin, S., Fein, S., Markus, H. R., McBain, K. A., & Williams, L. (2014). *Social Psychology*. Belmont, California: Wadsworth, Cengage Learning

Keyes, C. L. M. (1998). Social Well-being. *Social Psychology Quarterly, 61*(2), 121-140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behaviour*, *43*, 207-222.

Keyes, C. L. M. (2006). Mental health in adolescence: Is America's youth flourishing? *American Journal of Orthopsychiatry*, *76*(3), 395.

Keyes, C. L. M. (2014). Mental health as a complete state: how the salutogenic perspective completes the picture. In G. F. Baur & O. Hämmig (Eds.), *Bridging Occupational, Organisational, and Public Health: A Transdisciplinary Approach*, (pp. 179-187). London: Springer.

Keyes, C. L. M., Wissing, M. P., Potgieter, J. P., Temane, Q. M., Kruger, A., & Van Rooy, S. (2008). Evaluation of the mental health continuum – short form (MHC-SF) in Setswana speaking South Africans. *Clinical Psychology and Psychotherapy*, *15*, 181-192.

Khumalo, I. P., Wissing, M. P., & Schutte, L. (2014). Presence of meaning and search for meaning as mediators between spirituality and psychological well-being in a South African sample. *Journal of Psychology in Africa*, *24*(1), 61-72.

Kimura, M., de Oliveira, A. L. L. S., Mishima, & Underwood, L. G. (2012). Cultural adaptation and validation of the Underwood's Daily Spiritual Experience Scale - Brazilian version. *Revista da Escola de Enfermagem da USP*, *46*, 99-106.

Koenig, H. G., George, L. K., & Titus, P. (2004). Religion, spirituality, and health in medically ill hospitalized older patients. *Journal of the American Geriatrics society*, *52*(4), 554-562.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The Phq-9. *Journal of General Internal Medicine, 16*(9), 606-613.

Kwon, S. (2008). Well-being and spirituality from a Korean perspective: Based on the study of culture and subjective well-being. *Pastoral Psychology*, *56*, 573-584. doi 10.1007/s11089-008-0134-1

Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, *67*(1), 99-110.

Lee, M. T., Veta, P. S., Johnson, B. R., & Pagano, M. E. (2014). Daily spiritual experience and adolescent treatment response. *Alcoholism Treatment Quarterly*, *32*, 271-298. doi: 10.1080/07347324.2014.907029

Liang, B., Tracy, A. J., Kenny, M. E., Brogan, D., & Gatha, R. (2010). The relational health indices for youth: An examination of reliability and validity aspects. *Measurement and Evaluation Counselling and Development*, *42*(4), 255-274. doi: 10.1177/0748175609354596

Meng, W. C., & Dillon, D. (2014). Meaning making model: inner purpose, goals, and religiosity / spirituality partially predict acceptance strategies and volunteerism behaviours. *International Journal of Existential Psychology and Psychotherapy*, *5*(1), 105-123.

Moberg, D. O. (1971). *Spiritual well-being: Background and issues*. Washington, DC: White House Conference of Aging.

Moberg, D. O. (1984). Subjective measures of spiritual well-being. *Review of Religious Research*, *25*(4), 351-364.

Moerdyk, A. (2009). *The principles and practice of psychological assessment*. Pretoria, South Africa: Van Schaik.

Mofidi, M., DeVellis, R. F., Blazer, D. G., DeVellis, B. M., Panter, A. T., & Jordan, J. M. (2006). Spirituality and depressive symptoms in a racially diverse US sample of community-dwelling adults. *The Journal of nervous and mental disease*, *194*(12), 975-977.

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus statistical analysis with latent variables: Users' guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Ng, S. M., Ted, C. T., Fong, E., Tsui, Y. L., Friendly, A. Y., & Law, S. K. W. (2009). Validation of the Chinese version of Underwood's Daily Spiritual Experience Scale: Transcending cultural boundaries? *International Journal of Behavioural Medicine*, *16*, 91-97.

Paloutzian, R. F., & Ellison, C.W. (1982). Loneliness, spiritual well-being, and quality of life. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy.* New York: Wiley.

Paloutzian, R. F., & Park, C. L. (2005). *Handbook of the Psychology of Religion and Spirituality*. New York: Guilford.

Pargament, K. I. (2007). *Spiritually integrated psychotherapy: understanding and addressing the sacred.* New York, Guilford.

Pargament, K. I., & Mahoney, A. (2009). Spirituality: The search for the sacred. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford library of psychology. Oxford handbook of positive psychology* (pp. 611-619). New York: Oxford University Press.

Park, C. L. (2007). Religiousness/spirituality and health: A meaning systems perspective. *Journal of Behavioral Medicine*, *30*(4), 319-328.

Park, C. L., & Slattery, J. M. (2013). Religion, spirituality, and mental health. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 540-559). New York: The Guilford Press.

Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, *67*(6), 985-1013.

Piedmont, R. L. (2004). Spiritual transcendence as a predictor of psychosocial outcome from an outpatient substance abuse program. *Psychology of Addictive Behaviours*, *18*(3), 213-222.

Raykov, T. (2009). Evaluation of scale reliability for unidimensional measures using latent variable modelling. *Measurement and Evaluation in Counselling and Development*, *42*(3), 223-232.

Richardson, L. P., McCauley, E., Grossman, D. C., McCarty, C. A., Richards, J., Russo, J. E., Rickhill, C., & Katon, W. (2010). Evaluation of the Patient Health Questionnaire (PHQ-9) for Detecting Major Depression among Adolescents. *Pediatrics, 126*(6), 1117-1123. doi: 10.1542/peds.2010-0852

Sanchez, E. G. M., Arocena, F. A. L., & Ceballos, J. C. M. (2010). Daily spiritual experience in Basques and Mexican: A quantitative study. *Journal of Transpersonal Research*, *2*, 10-25.

Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive Psychology: An Introduction. In M. Csikszentmihalyi (Ed.), *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi,* (pp. 279-298). Dordrecht: Springer.

Smith, S. (2018). Validation of the Short Warwick-Edinburg Mental Well-being Scale in South Africa. (Master's dissertation). North-West University, Potchefstroom. Retrieved from https://dspace.nwu.ac.za/handle/10394/27599

Sprecher, S., & Fehr, B. (2005). Compassionate love for close others and humanity. *Journal of Social and Personal Relationships*, *22*(5), 629-651. doi: 10.1177/0265407505056439

Steffen, P. R. (2012). Approaching religiosity/spirituality and health from the eudaimonic perspective. *Social and Personality Psychology Compass*, *6*(1), 70-82.

Steger, M. F. (2012). Making Meaning in Life. *Psychological Inquiry*, *23*(4), 381-385. doi: 10.1080/1047840X.2012.720832

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80.

Tong, E. M. W. (2017). Spirituality and the Temporal Dynamics of Transcendental Positive Emotions. *Psychology of Religion and Spirituality, 9*(1), 70–81

Underwood, L. G. (2006). Ordinary Spiritual Experience: Qualitative Research, Interpretive Guidelines, and Population Distribution for the Daily Spiritual Experience Scale. *Archive for the Psychology of Religion*, *28*(1), 181-218.

Underwood, L. G. (2011). The daily spiritual experience scale: Overview and results. *Religions*, *2*, 29-50. doi: 10.3390/rel2010029

Underwood, L. G., & Teresi, J. A. (2002). The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis and preliminary construct validity using health-related data. *Annals of Behavioural Medicine*, *2*(1), 11-49.

Van Dyke, C. J., Glenwick, D., Cecero, J., & Kim, S. K. (2009). The relationship of religious coping and spirituality to adjustment and psychological distress in urban early adolescents. *Mental Health Religion and Culture*, *12*, 369-383.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling*. Hoboken, NJ: Wiley, Higher Education Press. //doi.org/10.1002/9781118356258

Wheeler, E. A., Ampadu, L. M., & Wangari, E. (2002). Lifespan development revised: African-centred spiritualty throughout the life cycle. *Journal of Adult Development*, *9*(1), 71-78.

WHO. (2007). Strengthening mental health promotion. Geneva: World Health Organisation (Fact sheet no. 220).

Winfield, T. (2013). The Seekers: Do Spiritual Practices Lead to a Sense of Well-being? *Journal of Personality and Social Psychology*, *84*, 377-389.

Wnuk, M., & Marcinkowski, J. T. (2014). Do existential variables mediate between religious-spiritual facets of functionality and psychological wellbeing. *Journal of Religion and Health*, *53*(1), 56-67. doi.org/10.1007/s10943-012-9597-6

Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, *30*(7), 890-905.

Wood, A. M., Joseph, S., Llyod, J., & Atkins, S. (2009). Gratitude influences sleep through the mechanism of pre-sleep cognitions. *Journal of Psychosomatic Research*, *66*, 43-48

# CHAPTER 3

# CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

**Keywords:** compassion, daily spiritual experience, gratitude, love, mental health, spirituality, spiritual well-being, transcendence, well-being.

The purpose of this study was to validate the English version of the Daily Spiritual Experience Scale (DSES) in a black South African student sample. The internal consistency reliability, as well as the convergent and divergent validity of the DSES were investigated. Conclusions drawn from the study, in line with the research objectives, are discussed, thereafter the limitations of the study are stated and lastly, recommendations for future research are given.

**Main Conclusions from the Study**

This study had the following research question: Could the DSES be validated in a group of black South African students?

The objectives were as follows:

1. To quantitatively investigate the internal consistency reliability of the DSES within a black South African student population.
2. To quantitatively investigate the factorial validity of the DSES within a black South African student population.
3. To quantitatively investigate the convergent and divergent validity of the DSES within a black South African student population.

The study had four main assumptions for the English version of the DSES in the proposed South African sample:

1. The DSES is unidimensional.
2. The DSES shows sufficient internal consistency reliability.
3. The DSES has medium to high positive correlations with other well-being scales, such as the Mental Health Continuum Short Form (MHC-SF).
4. The DSES has negative correlations with a scale measuring negative affect, such as the Patient Health Questionnaire-9 (PHQ-9).

The objectives of the study were met, and assumptions proven therefore the research question that guided the study was answered sufficiently.

In this study, data was collected through the following validated questionnaires: The Daily Spiritual Experience Scale (DSES) (Underwood & Teresi, 2002), Mental Health Continuum – Short Form (MHC-SF) (Keyes, 2002, 2006; Keyes et al., 2008) and the Patient Health Questionnaire (PHQ-9) (Kroenke, Spitzer, & Williams, 2001). Cross-sectional survey

data from participants of the study (N=324) was quantitatively analysed in four stages using SPSS 25 (IBM Corporation, 2017) and Mplus Version 8.2 (Muthén & Muthén, 1998-2017) statistical analysis software programmes.

**Conclusions Drawn from the Literature Study**

1. Although not religious or theistic, most people have spiritual and transcendental experiences with what they consider to be a higher being (Emmons, 2000; Jantos & Kiat, 2007; Moberg, 1971; Underwood, 2011). Some scholars (Good & Willoughby, 2005; Piedmont, 1999; Underwood, 2011) point out that many well-being interventions are successful because they contain a spiritual component. Kwon (2008) argued that spirituality could be understood as a contextual phenomenon that influences how people in different cultures know and experience well-being broadly and spirituality in particular.
2. Although the conceptual distinction between spirituality and religiosity is continuously being clarified, the consensus seems to be that spirituality and religiosity are intricately related (Dein, 2005; Hill et al., 2000). While spirituality is more comprehensive and encompasses a search for the sacred in any context, religion has institutional structures wherein the sacred is worshipped. Spirituality is beyond the bounds of religion, encompasses transcendence, and plays a role in the formulation of personal worldviews and meaning-making (Good & Willoughby, 2005; Underwood & Teresi, 2002).
3. Spirituality and spiritual experience play a role in enhancing well-being (Kalkstein & Tower, 2009; Moberg, 1971; Piedmont, 1999; Underwood, 2011; Underwood & Teresi, 2002). Spirituality can be understood as an intelligence that is characterised by transcendent and heightened states of consciousness (Emmons, 2000). And related to this, is that spirituality is a psychosocial resource (Wheeler, Ampadu, & Wangari, 2002) that can be used by individuals as a coping mechanism and interpersonally with others in social environments.
4. Daily spiritual experience is a personal perception and appraisal of the transcendent in one's daily life such as the practical experiences and phenomena through which individuals experience their broader spirituality (Underwood & Teresi, 2002). DSE taps into the following domains: gratitude, transcendence and compassionate love (Underwood & Teresi, 2002).

5. Spiritual well-being and DSE are important for general health and wellness (Emmons, 2000; Jantos & Kiat, 2007; Moberg, 1971, 1984; Underwood, 2011). Spiritual practice has been consistently found to predict adaptive health outcomes such as improved health behaviour and lowered substance use and abuse (Kalkstein & Tower, 2009; Underwood, 2011), improved psychological well-being (Van Dyke, Glenwick, Cecero, & Kim, 2009) and social and relational well-being (Kwon, 2008; Kalkstein & Tower, 2009).

**Conclusions Drawn from Research**

1. The study was grounded in positivism and quantitative inquiry where the research design was exploratory for the aim of validating the English version of the DSES. This design proved to be successful in achieving the objectives, supporting the assumptions and validating the scale in a South African student sample. Participants were 324 students at a South African university, who voluntarily participated by completing the questionnaires electronically. It would seem that students are more likely to consent to participating in research when the data collection is done electronically. The ethical principles of anonymity and confidentiality in data collection, is more easily upheld in electronic contexts.
2. Internal consistency reliability of the DSES, was found to be acceptable with reliability indices between 0.74 and 0.85, while the factor structure of the DSES was verified and showed good fit with values above 0.90 and a p-value of less than 0.08. The DSES proved to be unidimensional, which was also what the original authors found. This apparently confirms the construct validity of the DSES.
3. The DSES was found to have good convergent validity, a measurement model showed significant correlations with a measure of complete mental health (MHC-SF and subscales - EWB, SWB and PWB). This measurement model had good statistical fit with significant correlations between the DSES-factor and the three separate factors of the MHC.
4. Divergent validity was confirmed by correlating the DSES with a measure of pathology (PHQ). The measurement model had good statistical fit and non-significant correlations (close to 0.00).
5. From the results of the research it could be concluded that the DSES successfully measure the daily spiritual experience of individuals and that is stable over time and in different contexts. The DSES also compared well with the external criteria

purporting to measure the same phenomenon. The DSES in the South African context in which it was validated, thus showed content, criterion and construct validity.

**Limitations of the Study**

Although the study was successful in validating the DSES, there were some limitations which are detailed as follows:

1. The study was conducted among students within a university setting. The limitation was that other population groups could have similar or different results; therefore research along these lines are recommended.
2. The study was conducted among black African participants. It raises the question of whether the DSE of non-black participants would show the same or different results. Future research could focus on investigating whether DSES and other measures of spiritual well-being will replicate in different populations other than a black student population (Underwood, 2006).
3. This study relied on the one-time self-reports of participants, further research could focus on exploring the changes in DSE over time through longitudinal studies.
4. The DSES is an English psychometric instrument, the recommendation is that the scale be translated into the participants' language.

**Recommendations for Future Research**

In addition to some of the recommendations made along with the limitations, this study recommends the following for future research:

1. The DSES was validated in this study however, as seen in this and previous studies (Underwood & Teresi 2002; Ng et al., 2009; Underwood 2011) items 13 and 14 were statistically flawed. Future research could investigate why this is so.
2. Only one study was found that investigated Daily Spiritual Experience (DSE) among non-students. Future research could investigate the potential benefits of DSE in workplaces and other contexts.
3. Spiritual well-being as a construct is yet to be clearly conceptualised. Future research could focus on the conceptualisation and operationalisation of the construct.

**Reflection**

This was a winding and long meander punctuated by periods of doubt about my ability to even question theory or calculate anything. This course has been healing, from the

coursework to the research study. I feel that I am a more mindful, empathetic and peaceful practitioner and researcher because of all the personal and health challenges I experienced during my studies. Academically, I have gained so much insight and have been able to think and reflect deeply about spiritual well-being from my perspective as a sangoma and healing practitioner. I have been inspired to continue working to understand spirituality outside of formal religious or institutional settings and to work on promoting the benefits of spiritual well-being. I had the opportunity to see how data translated into statistical reasoning which in turn provided observable results. I enjoyed the data collection and statistics of this research, it was quite challenging, however I was determined to know and understand all of it.

**Conclusion**

This study was successful in validating the Daily Spiritual Experience Scale among a group of South Africans students. The aims were met and the research question was answered. The association of the DSES with the MHC indicated the importance of spiritual experiences in the well-being of people and the wisdom of Ellison (1983, p. 332), that "if we are spiritually healthy we will feel generally alive, purposeful and fulfilled, but only to the extent that we are psychologically healthy as well", seems to be the final word.

**References**


Dein, S. (2005). Spirituality, psychiatry, and participation: A cultural analysis. *Transcultural Psychiatry*, *42*, 526-544.

Emmons, R. A. (2000). Is Spirituality an Intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion*, *10*(1), 3-26. doi: 10.1207/S15327582IJPR1001_2

Good, M., & Willoughby, T. (2005). The role of spirituality versus religiosity in adolescent psychosocial adjustment. *Journal of Youth and Adolescence*, *35*(1), 41-55.

Hill, P. C., Pargament, K. I., Hood, R.W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour*, *30*(1), 52-77.

IBM Corporation. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.

Jantos, M., & Kiat, H. (2007). Prayers as medicine: How much have we learned? *Medical Journal of Australia*, *186*(10), 51-53.

Kalkstein, S., & Tower, R. B. (2009). The daily spiritual experiences scale and well-being: Demographic comparisons and scale validation with older Jewish adults and a diverse internet sample. *Journal of Religion and Health*, *48,* 402-417. doi 10.1007/s10943-008-9203-0

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behaviour*, *43*, 207-222.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The Phq-9. *Journal of General Internal Medicine, 16*(9), 606-613.

Kwon, S. (2008). Well-being and spirituality from a Korean perspective: Based on the study of culture and subjective well-being. *Pastoral Psychology*, *56*, 573-584. doi 10.1007/s11089-008-0134-1

Moberg, D. O. (1971). *Spiritual well-being: Background and issues*. Washington, DC: White House Conference of Aging.

Moberg, D. O. (1984). Subjective measures of spiritual well-being. *Review of Religious Research*, *25*(4), 351-364.

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus statistical analysis with latent variables: Users' guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Ng, S. M., Ted, C. T., Fong, E., Tsui, Y. L., Friendly, A. Y., & Law, S. K. W. (2009). Validation of the Chinese version of Underwood's Daily Spiritual Experience Scale: Transcending cultural boundaries? *International Journal of Behavioural Medicine*, *16*, 91-97.

Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, *67*(6), 985-1013.

Underwood, L. G. (2006). Ordinary Spiritual Experience: Qualitative Research, Interpretive Guidelines, and Population Distribution for the Daily Spiritual Experience Scale. *Archive for the Psychology of Religion*, *28*(1), 181-218.

Underwood, L. G. (2011). The daily spiritual experience scale: Overview and results. *Religions*, *2*, 29-50. doi: 10.3390/rel2010029

Underwood, L. G., & Teresi, J. A. (2002). The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, *2*(1), 11-49.

Van Dyke, C. J., Glenwick, D., Cecero, J., & Kim, S. K. (2009). The relationship of religious coping and spirituality to adjustment and psychological distress in urban early adolescents. *Mental Health Religion and Culture*, *12*, 369-383.

Wheeler, E. A., Ampadu, L. M., & Wangari, E. (2002). Lifespan development revised: African-cantered spiritualty throughout the life cycle. *Journal of Adult Development*, *9*(1), 71-78.