

# **THE RELATIONSHIP BETWEEN COPING AND SPIRITUAL WELL-BEING DURING ADOLESCENCE**

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Thesis submitted in partial fulfillment of the requirements for the degree of

PHILOSOPHIAE DOCTOR (Child Psychology)

in the

Faculty of Humanities  
Department of Psychology

at the

UNIVERSITY OF THE FREE STATE

Bloemfontein

November 2008

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## STATEMENT

I, Trevor Moodley, declare that the thesis submitted by me for the Philosophiae Doctor (Child Psychology) degree at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty. I furthermore cede copyright of the thesis in favour of the University of the Free State.

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Signed

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Date

## **Acknowledgements**

- To my Lord, GOD, through WHOM all things are possible.
  
- A big thank you and much appreciation for my supervisors, Dr Beukes and Professor Esterhuyse, whose knowledge, expertise, commitment, patience and humour, made this study possible.
  
- To my darling wife, Colleen and my daughters, Kim, Miche and Zoe, thank you for your love, patience, sacrifice and belief in me. Your faith in me was the wind beneath my wings.

## **READER'S ORIENTATION: CLARIFYING INFORMATION FOR EXAMINERS**

This thesis is presented in article format in accordance with the regulations of the University of the Free State. The research requirement for the PhD (Child Psychology) is three publishable articles. For the purposes of examination, the articles presented should be viewed as independent, yet related. Consequently, certain aspects of the study such as the discussion of research participants, procedure, measuring instruments and research variables are repeated either in all or some of the articles. To prevent tediousness, repetitions have been summarized. However, there may still be a perception of some overlap and repetition.

The thesis thus consists of the following:

Article I & Addendum A (pp. 1-28)	The factor analyses of the Spiritual Well-Being Questionnaire (SWBQ) using a South African adolescent sample
Article II (pp.29-62)	The role of age, gender and specific religious variables in the coping of adolescents
Article III (pp. 63-94)	The relationship between coping and spiritual well-being in a group of South African adolescents

**ARTICLE I: *The factor analyses of the Spiritual Well-Being Questionnaire using a South African adolescent sample***

*Gomez and Fisher (2003) developed the Spiritual Well-being Questionnaire (SWBQ) based on a theoretical model of spiritual well-being proposed by Fisher. According to Fisher, spiritual well-being comprises the personal, communal, environmental and transcendental domains, which are interrelated and cohere to give a global spiritual well-being dimension. The 2003 study showed the SWBQ to have good reliability and validity. Item response theory analyses of the SWBQ (Gomez & Fisher, 2005a) suggested general support for the psychometric properties of the SWBQ. However, there were also indications that certain items in the questionnaire needed to be improved. The present study was undertaken to do a factor analyses of the SWBQ using an adolescent South African sample to gauge its suitability. Gomez and Fisher's (2005a) recommendation was considered and certain items were added to the SWBQ for factor analyses with the aim of replacing some of the original items. The factor structure that was found in this study corresponds with the factor structure found in Gomez and Fisher's study (2003). Acceptable coefficients of internal consistency for the different subscales (factors) as well as for the global score of the SWBQ were found. In addition, in line with Gomez and Fisher's (2005a) recommendation, the revised SWBQ scale presented in this study seems to have been improved in terms of its psychometric properties and appears to be a reliable instrument in measuring the spiritual well-being of adolescents.*

Studies focussing on adolescence and spirituality/ religion generally indicate that spirituality/religion still plays a role in the lives of many adolescents. Wallace, Forman, Caldwell and Willis (2003) investigated the presence of religion in the lives of American adolescents by using data of about 80 000 8th, 10th and 12th grade high school students of 1998 and 1999 from the University of Michigan's Monitoring the Future study. Males and females were almost equally represented. The findings indicated that approximately 60% of U.S. young people felt that religion was "pretty" or "very important". About 50% attended church services regularly (monthly or more) and the vast majority (more than 80%) reported an affiliation with a specific religion. In the South African context there seems to be very little interest in researching spirituality/religion amongst adolescents, despite indications that religion/spirituality plays an influential role in the lives of many South African youth. According to the World Values Survey of 1999-2001, 62,1% of South African youth aged (18 to 24 years), indicated that religion was a very important factor in their lives, 98,7% reported that they believed in God, and 69,3% reported that God was very important in their lives (Lippman & Keith, 2006). Another motivation for researching spirituality/religion (and related aspects) amongst South African adolescents are the findings of many studies world-wide indicating the potential mediating

influence that spirituality/religion can have on adolescents' well-being and behaviours. With research in spirituality, well-being is one of the central issues in the measuring of this concept. Gomez and Fisher's (2003) *Spiritual Well-being Questionnaire* (SWBQ) shows acceptable psychometric properties. However, this instrument has not yet been evaluated for the South African context. Therefore, the purpose of this study is to determine whether the factor structure of this instrument is the similar for a South African population. But what do the concepts *spirituality* and *religion* mean and how are they related?

### **Conceptualising spirituality and religion**

Traditionally spirituality was closely related to or synonymous with the concept of religiousness. However, over the years, despite much work been done, little consensus has been reached about what these two terms actually mean (Zinnbauer et al., 1997). Various definitions of the two concepts have been suggested by different scholars with diverse views ranging from a polarization of the two concepts to the interrelationship of spirituality and religion, with some scholars suggesting one to be the subdomain of the other whilst other scholars suggesting the opposite. These various views are aptly summed up by Reich (1996) who mentioned four possible ways in describing the relationship between religiousness and spirituality: they are separate domains, they are distinct but overlapping domains, they are synonymous, one is a subdomain of the other.

Kelly (1995) posited that that spirituality is a subjective experience of the transcendental nature of the universe whilst religion is perceived to be the institutional and religious expression of spirituality. Spirituality is a universal experience, less constrained by the doctrines associated with specific religions (Polanski, 2002). Benson, Roehlkepartain and Rude (2003) support the possibility that there is significant overlap between religion and spirituality, but that both religious development and spiritual development have dimensions that fall beyond the domain of the other. Similarly, Wagener & Malony (2006) suggest that spirituality has the potential to address the ultimate questions that are intrinsic to the experience of being human. Spirituality includes experiences of transcendence, good and evil, belonging and connectedness, meaning and purpose. It is an integrative function leading to an experience of personal wholeness and defines the links between the self and the rest of creation, locating the individual within a transcendent system of meaning. Religion, on the other hand, is a shared belief and social structure within which spirituality is primarily shaped for most but not all people. Emmons (1999) suggested that a typical definition of spirituality encompasses a search for meaning, for unity, for connectedness, for transcendence, and for the highest of human potential.

Pargament (1997) defines religion in its broadest sense, as a multidimensional construct including both institutional religious expressions, such as dogma and ritual, and personal religious expressions, such as feelings of spirituality, beliefs about the sacred, and religious practices. In contrast to Pargament, Hodges (2002) considers spirituality to be the broader concept, representing transcendent beliefs and values that may or may not be related to a religious organization. Religiosity on the other hand refers to rituals and creeds, which may be demonstrated in the context of a religious institution. Spirituality may be expressed in a religious context but a person's religiosity is not always because of spirituality.

Considering the varied definitions of spirituality and religion mentioned above, it might be prudent to consider the position of Singleton, Mason and Webber (2004) in offering their definition of spirituality. They define spirituality as "*a conscious way of life based on a transcendent referent*" (p.250), but emphasize that their definition is not lexical. This means that they make no claim that their definition of spirituality is a summary of how others use the concept. Neither do they aim to establish a definitive definition of the concept. Rather, they offer a stipulative definition of this complex concept in terms of what spirituality means in their study.

Given the purpose of this study and Fisher's (cited in Fisher, Francis & Johnson, 2000) contention that spiritual health is reflected by the person's spiritual well-being, manifested in relationships with oneself (personal), others (communal), nature (environment), and God (or transcendental other), the definition of spirituality put forward by Elkins, Hedstrom, Hughes, Leaf and Saunders (1988) seems to aptly reflect Fisher's conceptualization of spiritual well-being. They view spirituality as "*a way of being and experiencing that comes about through awareness of a transcendent dimension and that is characterized by certain identifiable values in regard to self, others, nature, life, and whatever one considers to be the Ultimate*" (p.10).

In light of the above, specifically in terms of the stance taken by Singleton et al. (2004), the writer adopts the position that spirituality is broader than (Hodges, 2002), yet interrelated with religion (Benson et al., 2003) and that spirituality is expressed by Fisher's four domains of spiritual well-being (cited in Fisher et al., 2000) which, in essence, is similar to the definition offered by Elkins et al. (1988). For the purposes of this article, the terms spirituality and religion will be used interchangeably.

### **Spiritual well-being**

A related and equally complex concept to spirituality/religion is the concept of spiritual well-being. The National Interfaith Coalition on Aging (NICA) proposed one of the earliest attempts at a wide definition of spiritual well-being in 1975. The NICA perceived spiritual well-

being to be an affirmation of life in a relationship with oneself (personal), others (communal), nature (environment), and God (or transcendental other) (Ellison, 1983; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a, 2005b). Ellison (1983) viewed spiritual well-being as an expression of an underlying state of spiritual health. He compared this situation to the colour of a person's complexion and pulse rate as expressions of his/her health.

By integrating these concepts, Gomez and Fisher (2003) define spiritual well-being in terms of “*a state of being, reflecting positive feelings, behaviours, and cognitions of relationships with oneself, others, the transcendent and nature, that in turn provide the individual with a sense of identity, wholeness, satisfaction, joy, contentment, beauty, love, respect, positive attitudes, inner peace and harmony, and purpose and direction in life*” (p. 1976). A brief discussion of Fisher's model of spiritual well-being follows.

### **Fisher's model of spiritual well-being**

Fisher proposed a model of spiritual well-being in his unpublished doctoral dissertation in 1998 (cited in Fisher et al., 2000; Gomez & Fisher, 2003, 2005a) based on the NICA (mentioned above) domains of spiritual well-being. In the 1998 study, Fisher interviewed 98 secondary school teachers to gauge their thoughts on what they considered important indicators of spiritual well-being in their students. The questions used in the interview reflected a number of measures of spiritual well-being at the time. These included the Spiritual Well-Being Scale (Ellison, 1983), the Spiritual Orientation Inventory (Elkins et al., 1988), the Mental, Physical and Spiritual Well-Being Scale (Vella-Brodrick & Allen, 1995), the Spiritual Assessment Inventory (Hall & Edwards, 1996), the Perceived Wellness Survey (Adams, Bezner & Steinhardt, 1997), and the JAREL Spiritual Well-Being Scale (Hungelmann, Kenkel-Rossi, Klassen & Stollenwerk, 1996). Quantitative analyses of Fisher's 1998 study was consistent with the NICA (1975) model, which led Fisher to also conclude that spiritual health is a dynamic state of being. It is reflected by the extent to which people live in harmony within relationships in the following domains of spiritual well-being: relationships with oneself (personal), others (communal), nature (environment), and God (or transcendental other). An individual's spiritual health therefore seems to be indicated by the combined effect of spiritual well-being in each of the domains embraced by the individuals. The relationships of the domains were explained using the notion of progressive synergism, where a domain builds on an in turn is built on by other domains (Fisher et al., 2000).

In the personal domain one intra-relates with oneself about meaning, purpose and values in life. The human spirit creates self-awareness relating to self-esteem and identity. The communal domain is expressed in the quality and depth of interpersonal relationships, between

the self and others. Morality, culture and religion are included in the communal domain. It also includes love, justice, hope, and faith in humanity. The environmental domain relates to care and nurture for the physical and biological, to a sense of awe and wonder as well as the notion (for some) of unity and connectedness with the environment. The transcendental domain refers to one's relationship with some-thing or some-One beyond the human level, such as a cosmic force, transcendent reality, or God. It involves faith towards as well as an adoration and worship of the source of mystery of the universe. The quality of the relationship in each of the four domains reflects a person's spiritual well-being in that domain. Fisher also proposed that the four domains of spiritual well-being cohere to give a person's global or overall dimension of spiritual well-being. The four domains are not isolated, but interrelated. Spiritual health can therefore be enhanced by developing positive relationships in each domain and increased by embracing more domains (Fisher, 2000; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a, 2005b).

Fisher et al. (2000) highlighted the following shortcomings regarding specific spiritual health measures at the time:

- The Spiritual Well-Being Scale (SWBS) produced by Ellison (1983) comprised of two dimensions, Existential Well-Being (EWB) and Religious Well-Being (RWB). Each was measured by answers to ten questions. Both dimensions involve transcendence, or a stepping back from and moving beyond what is. Although partially distinctive, the two dimensions also affect each other. Thus, there would be some statistical overlap between them. The EWB's two subsets, namely life direction and life satisfaction, were measures of meaning, purpose and values in life. Those concerns correspond with the concerns of only the personal domain of Fisher's model of spiritual well-being. Ellison did not consider relationships with others and with the environment. All ten items of the RWB scale included the term "God". The scale was therefore restricted to theocentric religions. The RWB scale would correspond with relationships with the transcendent other in the transcendental domain of Fisher's model.
- The Spiritual Orientation Inventory was developed by Elkins et al. (1988). This measure of humanistic spirituality has 85 questions in nine subscales, clustered around two factors, the experiential dimension and the value dimension (Tloczynski, Knoll & Fitch, 1997). The questions essentially relate to personal and communal aspects of spiritual health with some references to the environment and a deliberate exclusion of religion and any mention of the Transcendent Other.
- Kuhn's Spiritual Inventory (1988) as reported by McKee & Chappel (1992) consists of 25 questions focussing on relations with self, others and the Transcendent, but not environment.

- Glik (1990) used Sorokin's (1947) theory of cultural value systems to develop a 19-item Index of Spiritual Orientation. This measure had three distinct factors which corresponded conceptually to "*Ideational beliefs*" (nine items), "*Salience of religion*" (six items) and "*Mysticism*" (four items). The items included relationships with self, environment, God and some aspects of religion, but not interpersonal relationships. This index could therefore be seen as a measure of religiosity rather than an index of spirituality.
- Cross (1994) reported on the computer driven questionnaire called the Problem Knowledge Coupler (PKC) Wellness Coupler. It comprised of 268 questions, of which an unspecified number of questions related to spiritual wellness. The spiritual wellness items included beliefs, purpose in life and death/suicide urges, which relate to the personal domain of spiritual well-being.
- The Mental, Physical and Spiritual Well-being (MPS) Scale was developed by Vella-Brodrick and Allen (1995). The spiritual part of the MPS comprised of ten questions relating to two dimensions, the existential and the religious dimensions. Four of the questions related to existential well-being, one was specifically religious and five could be interpreted from either a religious or an existential perspective. The ten questions related to some aspects of the personal, communal and religious domains, but none related to the environmental domain.
- Hungelmann et al. (1996) developed the JAREL Spiritual Well-Being Scale as an assessment tool to provide a way of establishing a nursing diagnosis of spirituality in older adults. The scale consists of 21 questions, 11 of the questions focussed on self, four on others, five on the Transcendent and one that does not appear to fit into any spiritual domain. Although the '*model of spiritual wellbeing, reflecting harmonious interconnectedness of the major themes of time and relationships*' (p.262) contains a reference to "*Nature*", the JAREL Scale contains no reference to the environment.
- The Spiritual Assessment Inventory developed by Hall & Edwards (1996) focuses entirely on the relationship with God, investigating both the awareness and quality of this relationship. It therefore excludes many aspects of a person's relationship with himself or herself and may totally exclude others and the environment.
- The Perceived Wellness Survey was designed by Adams et al. (1997). It contained a spiritual wellness dimension measured by six items. These items (three related to meaning and the other three, to purpose in life) are limited to the personal domain, not to the broader relationships found in the communal, environmental and religious domains of spiritual well-being as proposed by Fisher's model.
- Skevington, MacArthur and Somerset (1997) developed some items for the World Health

Organisation Quality of Life (WHOQOL) instrument. Five domains of 33 facets of life were proposed for the WHOQOL. Four of these domains had items that related to self, purpose, community and environment. Happiness was ranked as the most important aspect of quality of life and religion the least important, although highly valued by a sub-section. The free listing of concerns yielded comments on the need for loving relationships and specific environmental concerns. This study contains some aspects of the personal, communal and environmental domains proposed by Fisher's spiritual well-being model, but not the transcendental domain.

In light of the concerns raised about the existing spiritual health questionnaires at the time, Gomez and Fisher (2003) set about developing and validating their own spiritual well-being questionnaire, which they named the Spiritual Well-being Questionnaire (SWBQ).

### **The development and validation of the Spiritual Well-being Questionnaire (SWBQ)**

Gomez and Fisher (2003) were of the view that existing spiritual health questionnaires did not provide a balance in all the four domains of spiritual well-being identified by Fisher in 1998 (cited in Fisher, 2000; Fisher et al., 2000; Gomez & Fisher, 2003). Consequently, they developed a 20-item instrument known as the Spiritual Well-Being Questionnaire (SWBQ). Gomez and Fisher (2003) undertook four studies in developing and validating the SWBQ, a self-rating measure of spiritual well-being.

The first study's sample comprised 248 Australian secondary school students (120 males and 128 females) from four different secondary schools. The participants' ages ranged from 11 to 16 years with a mean of 13,80 (S.D. = 1, 33). In this study, the development of the questionnaire was undertaken, beginning with an initial instrument of 48 items (12 items per domain of spiritual well-being). Participants were asked to rate how the items in the questionnaire rated their personal experience over the previous six months, using a five-point Likert scale, ranging from low (rated 1) to very high (rated 5). Exploratory factor analysis using principal component analysis with oblimin rotation was used, to outline a shortened 20-item questionnaire comprising five items for each domain of spiritual well-being. The exploratory factor analysis was generally supportive of the four domains of spiritual well-being as proposed by Fisher's model.

Study 2 involved a sample of 537 Australian secondary school students (272 males and 265 females) from five different secondary schools. The age range of the participants was 11 to 16 years with a mean of 13,78 (S.D. = 1,38). The mean age for males was 13,66 years (S.D. = 1,36) and for females 13,89 (S.D. = 1,39). There was no significant difference between the gender groups,  $t(d.f. = 535) = 1,90$ , ns. The factor structure of the 20 items of SWBQ was

examined by conducting exploratory factor analysis. The hypothesis that the four individual domains of spiritual well-being cohere to give a (secondary) global dimension of spiritual well-being was also examined. In addition, some data on the internal consistency, and the convergent and discriminant validity of the SWBQ was reported. Participants were requested to complete the SWBQ (see Study 1) as well as Ellison's (1983) SWBS, because items of the existential well-being subscale of the SWBS reflect the SWBQ's personal, communal and transcendental domains. In addition, the religious dimension of the SWBS has items that reflect the transcendental domain of the SWBQ.

Exploratory factor analysis using principal component analysis with oblimin rotation was used to establish the factor structure of the SWBQ. The analysis resulted in four factors. The correlations of the total scores of items comprising personal with transcendental, environmental, and communal domains were 0,30; 0,47 and 0,58 respectively. The respective correlations of the transcendental domain with the environmental and communal domains were 0,20 and 0,28. The correlation between the environmental and the communal domain was 0,40. In addition, all the primary factors also correlated significantly and positively with the total score of the SWBQ. The respective correlations were 0,76; 0,70; 0,71 and 0,72 for the personal, transcendental, environmental and communal domains. Second order factor analyses was done by subjecting the total scores for the items comprising the four primary factors to exploratory factor analysis using principal component analysis with oblimin rotation. The results indicated a single higher order factor that accounted for 56% of the variance, comprising all four factors with an eigenvalue of 2,16 and loadings ranging from 0,54 to 0,83. The intercorrelations of the four primary factors were also significant ( $p < 0,01$ ).

Taken together, these results provide support for the four spiritual well-being domains being components of a higher order global spiritual well-being dimension as proposed by Fisher's model of spiritual well-being. The Cronbach's alpha values indicated high internal consistency for both the primary and secondary dimensions. The Cronbach's alpha values were calculated at 0,89; 0,86; 0,76 and 0,79 for the personal, transcendental environmental and communal domains respectively and 0,92 for all items together. The correlations of the scores of the SWBQ and SWBS were examined to determine the convergent and discriminant validity of the SWBQ. The results indicated a high correlation between the religious dimension of the SWBS and the transcendental domain of the SWBQ, thereby supporting the convergent validity of the transcendental domain of the SWBQ. There were low correlations of the religious well-being dimension of the SWBS and all the other domains of the SWBQ, thus supporting the discriminant validity of the personal and communal domains of the SWBQ. Although there were significantly strong correlations of the existential well-being dimension of the SWBS with all the

SWBQ domains, the correlations were especially strong for the personal, transcendental and communal domains. These findings therefore support the convergent validity of the personal, transcendental and communal domains of the SWBQ, given that the existential well-being dimension of the SWBS is a fusion of the SWBQ's personal, transcendental and communal domains. The global scores of both instruments correlated moderately. The findings in this study therefore support the convergent and discriminant validity of the primary and global scales of the SWBQ.

Study 3 involved a sample of 832 participants (416 males and 416 females) ranging in ages from 18 to 42 years, with a mean age of 20,20 (S.D. = 2,95). Participants were drawn from six Australian universities and were required to complete the SWBQ developed in Study 1. This study examined the factor structure of the SWBQ using confirmatory factor analysis (CFA). Against the background of the first two studies, this study firstly examined support for a four-factor oblique model in which the relevant items of each of the SWBQ's four domains loaded on four separate first order factors, with the factors freely correlated. Secondly it examined a second order CFA model, in which all the four first order factors loaded on a single higher order spiritual well-being factor, with the first order factors not correlated with each other (i.e. orthogonal). Reliability data were also provided. The initial exploratory factor analysis of SWBQ ratings produced similar results to Study 1. Thus, the exploratory factor analyses of Studies 1-3, showed the expected four factors for the SWBQ, across different age and gender groups. The means (S.D.) were 19,97 (3,39); 13,00 (6,06); 16,69 (4,23); and 20,77 (3,16) for the personal, transcendental, environmental, and communal domains, respectively. The respective Cronbach's alpha values were 0,82; 0,95; 0,83 and 0,82. The CFA results of the four-factor oblique model indicated all good fit indices for this model. There were respective correlations of 0,17; 0,53 and 0,86 for the personal with transcendental, environmental and communal domains. The correlations of transcendental with environmental and communal were 0,16 and 0,18 respectively. The correlation of the environmental with the communal domain was 0,44. All the correlations were significant. This suggested that these latent factors might be related to a single higher order factor. The hierarchical second order CFA model (i.e. all the four first order orthogonal factors loading on a single higher order spiritual well-being factor) was tested by comparing it with the one-factor first order CFA model (i.e. the four first order factors not allowed to correlate with each other). The fit scores for both the one-factor and the four-factor orthogonal models were outside the range considered as good fit, while all the fit scores of the second order CFA model were good. These results, when taken together, indicate evidence for the construct validity of the SWBQ as well as Fisher's model of spiritual well-being.

Study 4 comprised of a sample of 456 participants drawn from an Australian university as well as from universities in England and Ireland. The participants ranging age from 18 to 24 years, involved 146 males and 310 females, with a mean age of 20,20 (S.D. = 2,95). CFA was used to examine the SWBQ models tested as part of Study 3. The SWBQ's reliability was established by examining the composite reliability, variance extracted and internal consistency of the four spiritual well-being factors and the global spiritual well-being factor. The validity was established by examining (1) the factorial independence of the spiritual well-being domains from the personality dimensions, (2) the relationships of the spiritual well-being domains with Eysenck's (1967) personality dimensions (neuroticism, psychoticism, and extraversion) and happiness, and (3) whether the spiritual well-being domains contributed additional variance over that of the personality dimensions in the prediction of happiness. Participants completed (1) the SWBQ, (2) Adult Eysenck Personality Questionnaire-Revised Short Scale (EPQ-R/SS, Eysenck & Eysenck, 1991 cited in Gomez & Fisher, 2003), and the Oxford Happiness Inventory (OHI) (Argyle, Martin & Crossland, 1989). The EPQ-R/SS is a measure of neuroticism, psychoticism and extraversion. It also has a lie score that can be interpreted as a measure of social desirability. The OHI provides a measure of overall happiness. This study's findings indicated the following:

### ***Confirmatory factor analysis and construct validity of the SWBQ***

The fit values of the four-factor oblique model and the second order CFA model were all good. The fit for the one-factor and the four factor orthogonal models were outside the range considered good. The correlations of personal well-being with the communal, environmental and transcendental well-being factors were 0,87; 0,54 and 0,31 respectively. The respective correlations of the communal with the environmental and transcendental well-being factors were 0,42 and 0,20. The correlation of the environmental with the transcendental well-being factor was 0,13. All the correlations were significant ( $p < 0,01$ ). Taken together, these findings once again support Fisher's hierarchical model of spiritual well-being and provide evidence for the construct validity of the SWBQ.

### ***Reliability of the spiritual well-being constructs of the SWBQ***

Composite reliability scores for the personal, communal, environmental, transcendental and global spiritual well-being domains were 0,84; 0,86; 0,85; 0,95 and 0,73 respectively. Variance extracted for the personal, communal, environmental, transcendental and global spiritual well-being domains were 0,52; 0,55; 0,53; 0,75 and 0,41 respectively. Cronbach's alpha scores for the personal, communal, environmental, transcendental and global spiritual well-being

domains were 0,80; 0,84; 0,84; 0,95 and 0,89 respectively. Generally, composite reliability scores of above 0,70 and variance extracted scores above 0,50 are considered acceptable. In this study, except for the reliability score derived from the variance extracted method for the global spiritual well-being domain, all other reliability measures showed acceptable levels. Thus, the results show support for the reliability of the four spiritual well-being constructs as well as the global spiritual well-being construct.

### ***Factorial independence of the SWBQ***

Exploratory factor analysis using principal component analysis with oblimin rotation was used to examine the factorial independence of the SWBQ's four spiritual well-being domains from the lie scores and personality dimensions of the EPQ-R/SS. None of the spiritual well-being domains and personality dimensions loaded together on the same factor. This suggested factorial independence of the spiritual well-being domains from the personality dimensions.

### ***Convergent and discriminant validity of the SWBQ***

The domain and global scores of the SWBQ were correlated with the dimension scores of the EPQ-R/SS as well as the total score of the OHI. There was a positive and significant correlation of the EPQ-R/SS's lie score with the global, personal and environmental well-being scores of the SWBQ. Thus, social desirability effects may influence one's perceptions of one's spiritual well-being in these areas. In terms of the personality dimensions, there was a significant and negative correlation of psychoticism with all the spiritual well-being measures. There was a significant and positive correlation of extraversion with the global, personal and communal well-being measures. Neuroticism correlated significantly and negatively with personal well-being. When considering that existing data indicate that spirituality (a concept related to spiritual well-being) is positively associated with extraversion and negatively with psychoticism (MacDonald, 2000; Maltby & Day, 2001a, 2001b), the findings are therefore supportive of the convergent and discriminant validity of the spiritual well-being dimensions of the SWBQ. Global spiritual well-being as well as the personal, communal and environmental domains correlated positively and significantly with happiness. Happiness was unrelated to transcendental well-being. Argyle and Hills (2000) found happiness to be associated with a spiritual factor ("Immanent") that reflects Fisher's personal and transcendental well-being domains, while Fehring et al., (cited in Gomez & Fisher, 2003) found a negative association between happiness and the spiritual well-being factors that reflected Fisher's transcendental domain. Given previous findings, the findings in this study of positive association between personal spiritual well-being and happiness, as well as no relation between transcendental well-being and happiness can be inferred as supportive of the

concurrent validity of the personal spiritual well-being domain and the discriminant validity of the transcendental well-being domain.

### ***Incremental validity***

In terms of incremental validity, the additional variance contributed to happiness by spiritual well-being over that made by personality was examined through hierarchical regression analysis. The findings implied that global, personal, communal and environmental well-being contributes additional variance to happiness over that made by personality.

Gomez and Fisher's four studies (2003) can be summarised as follows:

The results of exploratory factor analysis (Studies 1-3) and the confirmatory factor analysis (Studies 3 and 4) supported Fisher's model that spiritual well-being can be conceptualised in terms of the four domains of spiritual well-being (personal, communal, environmental and transcendental). There were also significant and moderate to high correlations between the domains (Studies 2-4), supporting Fisher's model. Both exploratory (Studies 2 and 3) and confirmatory (Studies 3 and 4) factor analyses indicated that the four domains reflect primary dimensions of spiritual well-being that cohere to form a global spiritual well-being dimension. Based on the results of the first study, the SWBQ was developed to provide a self-rating questionnaire reflecting Fisher's theoretical model of spiritual well-being. The questionnaire comprised 20 items with five items representing each of the four domains of spiritual well-being. The findings of the studies indicated generally high internal consistency (Studies 2-4), composite reliability (Study 4) and variance extracted (Study 4) for the global as well as for the four domains of the SWBQ. Strong support for construct validity was indicated by both exploratory factor analysis (Studies 2 and 3) and confirmatory factor analysis (Studies 3 and 4). A joint factor analysis (Study 4) of the four SWBQ domains with Eysenck's personality dimensions (cited in Gomez & Fisher, 2003) provided further support for construct validity of the SWBQ and its dimensions. The global and domain scores of the SWBQ correlated appropriately with the global and dimensions scores of Ellison's (1983) widely used SWBS, thus showing good convergent and discriminant validity. In addition, in line with the predictions of existing theory and data the scores of the global as well as the four domains correlated as expected with extraversion, neuroticism, psychoticism and happiness (Study 4). The demonstration that the SWBQ scores contributed additional variance over that of the personality dimensions in predicting happiness indicated the support for their incremental validity as well. Overall, the four studies undertaken demonstrate support for Fisher's model and that the SWBQ is a reliable and valid measure of spiritual well-being. When compared with other measures of spiritual well-

being, the SWBQ has the advantage because it is based on a broader conceptualisation of spiritual well-being (Gomez & Fisher, 2003).

### **Investigating the psychometric properties of the SWBQ scales using Item Response Theory**

The studies mentioned above examined the psychometric properties of the SWBQ scales using scores based on the traditional classical test theory (CTT). In another study, Gomez & Fisher (2005a) further investigated the psychometric properties of the SWBQ using item response theory (IRT). The sample in this study comprised 4464 participants mainly from Australian secondary schools and universities, as well as some participants from the general Australian community (mainly church groups) and university students from the United Kingdom and Ireland. The participants' ages ranged from 15 to 32 years. Participants were required to complete the SWBQ.

IRT is a model-based measurement theory that aims to show the relationship between the responses to items and the trait or ability that each item is supposed to be measuring (e.g., Brinbaum, 1968; Emberston & Reise, 2000). Emberston and Reise (2000) claim that IRT has many advantages over CTT for evaluating the psychometric properties of measures. Gomez and Fisher (2005a) mention three advantages of particular relevance to their 2005 study. Firstly, CTT provides a single score, derived from the scores of different items comprising the scale to represent a trait. In IRT, trait scores are available at the item level. Secondly, CTT only provides one reliability (such as internal constancy) value and one standard error (SE) value for all levels of the scores obtained in a measure. IRT, on the other hand, provides the reliability of each item at different levels of the underlying trait, controlling for the characteristics (e.g. difficulty) of the items in the scale. Thirdly, CTT psychometric properties such as reliability, item-total correlation and SE are sample dependant, therefore they can vary across samples. Within a linear transformation, IRT psychometric properties are assumed to be group invariant or sample independent. Since IRT provides parameters at the item level, it allows for the identification of items that are functioning differently in terms of their ability to discriminate, represent and reliably measure the traits at different levels of the underlying traits. In turn, this can facilitate the development and revision of measures. Gomez and Fisher (2005a) were therefore of the view, that the IRT would provide more valuable data on the psychometrics of the scales and items of the SWBQ and would also provide useful guidance for their improvement.

This study used Samejima's (1969) graded response model (GRM) to examine the psychometric properties of the items in the personal, communal, environmental and transcendental scales of the SWBQ. This study's findings indicated acceptable IRT based psychometric properties for all items in the personal and transcendental scales of the SWBQ.

The study also indicated that of the five items comprising the communal scale, only two of the items, “*respect for others*” and “*kindness to others*” have acceptable IRT based psychometric properties. The other three items (“*love for others*”, “*forgiving others*” and “*trusting others*”) are especially weak in their reliability at all trait levels. Findings related to the environmental scale, indicated that the items “*connect with nature*”, “*oneness with nature*” and “*harmony with environment*” have acceptable psychometric properties in terms of the IRT model used. In contrast the other items of the environmental scale, namely “*awe at view*” and “*magic in the environment*” did not have acceptable IRT psychometric properties. The communal scale, especially the three items with low reliability, could thus benefit from a major revision. The two items on the environmental scale with low reliability may need to be revised to improve their reliability. The findings also indicated that even those items found to have acceptable psychometric properties can benefit from some changes that will allow the items to better represent and more accurately measure the relevant traits at high levels. In addition, the findings indicate that the first two response options for the items in the personal, communal and environmental domains could be collapsed into a single response option. Thus, the items in these scales may be improved by having fewer response options at the lower end of the relevant spiritual well-being traits and more response options at the higher end of the relevant traits. For the transcendental items, it may be prudent to reduce the number of response options at both the lower and higher regions of this trait.

### **SWBQ model applicability, measurement and structural equivalencies, and latent mean differences across gender**

Fisher and Gomez (2005b) undertook another study using multigroup CFA to examine gender equivalencies (invariance) of the measurement (the number of factors and factor loadings) and structural (factor invariances and covariances) models of the SWBQ and the latent mean differences factors across these groups. The participants consisted of 3101 females and 1361 males, ranging in age from 15 to 32 years. They were required to complete the SWBQ. The findings in this study provide support for the invariance in factor loadings across males and females for the SWBQ. There were mixed findings for the invariance in factor variances and covariances. In relation to statistical fit, the findings supported no differences for the variances for personal, environmental and transcendental, and the covariance between transcendental and personal. Significant differences were found for the variance for the communal and the covariances for the communal and personal, environmental and personal, communal and environmental, transcendental and communal, and transcendental and environmental. However, the practical fit indices supported the invariance for all variances and covariances. Only the

communal well-being domain, with females scoring higher, showed difference in the test for latent mean difference. Overall, these findings provide reasonable support for the gender equivalencies of the SWBQ across males and females (Gomez and Fisher, 2005b).

Given the findings of Gomez and Fisher (2003, 2005,a) and as part of a broader study, the objective of this article was to report on the analyses of the factor structure of the SWBQ instrument by using information gathered by a South African sample.

## **RESEARCH METHOD**

### ***Participants***

The total sample comprised 1283 grades 8 to 12 learners from 10 public high schools located in the metropole of Cape Town, South Africa. The high schools were firstly categorised in terms of medium (language) of instruction. Thereafter a random selection, as per category, was done to identify three English, three Afrikaans and four dual-medium schools for participation in the study. Within the schools, convenience samples were used. Participants' ages ranged from 13-20 years. Since language could be an important factor in the (South African) context of this study, it was decided to only include responses of participants whose home languages were either English or Afrikaans or both in the final study. Table 1 gives the frequency distribution of the participants in terms of home language.

From Table 1 it is evident that 99 learners were excluded from the final study since their home languages were neither Afrikaans nor English, nor both. The final research group thus consisted of 1184 learners. Of these 1184 learners, 544 (45,9%) were males and 639 (54,1 %) were females. One learner did not indicate his/her gender.

**Table 1: Frequency distribution of research participants according to home language**

<b>Home language</b>	<b>N</b>	<b>%</b>
English	509	39,7
Afrikaans	511	39,8
Xhosa	32	2,5
English and Afrikaans	164	12,8
English and Xhosa	27	2,1
Afrikaans and Xhosa	5	0,4
Other	29	2,3
No response	6	0,4
Total	1283	100,0

## ***Procedure***

Since the study was conducted at public schools, permission was sought and granted by the Western Cape Education Department on the following conditions. The principals of the identified schools also had to give permission to conduct the study at their schools at times that suited the respective schools. The schools also identified possible participants, who also had to agree to participate voluntarily in the study.

Participants were required to complete a questionnaire. The questionnaires were administered at the schools during school hours. The time allocated for the completion of the questionnaires was within a school period, between 40 and 50 minutes of duration. Participant group sizes varied from 19 to 70 at a time. The questionnaires were administered by the researchers themselves with support being given by class teachers and/or helpers depending upon the group size. In this manner, the researchers could monitor the process, and respond to possible questions from the participants concerning items in the questionnaire. Questionnaires were completed anonymously and participants were assured that all information would only be used for the purposes of the study and would be treated with the strictest confidentiality.

## ***Measuring instrument***

### *Spiritual Well-Being Questionnaire (SWBQ)*

Participants were required to complete the SWBQ as a means of measuring their spiritual well-being. As mentioned above, spiritual well-being is measured by the SWBQ in terms four domains: the personal, transcendental, environmental and communal domains. These domains also cohere to give a global domain of spiritual well-being. Responses for each item are indicated on a five-point scale varying from 1 (very low) to 5 (very high). A high score in a particular domain would therefore suggest a high level of spiritual well-being within that domain. Higher levels of spiritual well-being across domains, in turn, would suggest a higher level of global (or total) spiritual well-being (Fisher, 2000; Gomez and Fisher, 2003, 2005a).

The reliability as well as the validity of the SWBQ was mentioned above in the discussion of Gomez and Fisher's study (2003). A brief description of the relevant findings will follow. The (2003) studies' findings indicated generally high internal consistency, composite reliability and variance extracted for the global as well as the four domains of the SWBQ. Strong support for construct validity was indicated by both exploratory factor analysis and confirmatory factor analysis. A joint factor analysis of the four SWBQ domains with Eysenck's personality dimensions (cited in Gomez & Fisher, 2003) provided further support for construct validity of the SWBQ and its dimensions. The global and domain scores of the SWBQ

correlated appropriately with the global and dimension scores of Ellison's (1983) widely used SWBS, thus showing good convergent and discriminant validity. In addition, in line with the predictions of existing theory and data, the scores of the global as well as the four domains correlated as expected with extraversion, neuroticism, psychoticism and happiness. The demonstration that the SWBQ scores contributed additional variance over that of the personality dimensions in predicting happiness indicated the support for their incremental validity as well (Gomez & Fisher, 2003).

The SWBQ questionnaire was back-translated into Afrikaans by the University of Stellenbosch translation service. The language translators also made suggestions regarding the terminology being used in several items of SWBQ (English version) to make it more comprehensible to the participants, in line with the local context of language use. Based on the findings of Gomez and Fisher's (2005a) item response study that the SWBQ's communal and environmental subscales could be further improved, two items were adapted and six items were added. The item "*I feel a sense of 'magic' in the environment*" – found to have lower levels of discrimination – was changed to "*I feel a sense of 'fascination' in the environment*". The item "*I feel awe when I see a breathtaking view*" was changed to "*I feel respect when I see a breathtaking view*" (thought to be more appropriate to the South African adolescent reader according to the translation service). Three questions were added exploring the communal domain, two questions exploring the environmental domain and one exploring the personal domain. All these questions emerged from Fisher's descriptions of the domains (cited in Gomez & Fisher, 2003). Changes in terminology and additional items are indicated in Addendum A.

### ***Statistical analyses***

A statistical modelling design was followed. Firstly, an exploratory factor analysis was performed using principal axis factor analysis with an oblique rotation. To determine how many factors were to be evaluated, parallel analysis (Horn, 1965) was employed. Secondly, a confirmatory factor analysis, by means of the EQS (Bentler, 2006), was employed to evaluate the factor structures of the SWBQ measuring instrument.

## **RESULTS AND DISCUSSION**

### ***Exploratory factor analysis***

In this study, raw scores and not standardized scores were used. These scores were obtained by calculating the sum of items. The factor structure of the SWBQ was investigated by subjecting items to a principal axis factor analysis procedure, using the SAS-Programme (SAS

Institute, 2003). The factors were rotated using the oblimin (oblique) procedure to improve factor interpretability. The results relating to the eigenvalues as well as the percentage variance that are explained by the factors are indicated in Table 2.

**Table 2: Results of extraction of components for spiritual well-being**

Factor	Eigenvalue	Percentage of variance	Cumulative percentage of variance
Factor 1	7,9859	30,7	30,7
Factor 2	2,1922	11,2	41,9
Factor 3	2,4878	9,6	51,5
Factor 4	1,3962	5,4	56,9

The principal axis factor analysis yielded four factors with an eigenvalue greater than one. These four factors explained 56,9% of the total variance. The factor loadings of the 26 items that were rotated in terms of the oblique method appear in Table 3.

As already indicated, six items were added to the SWBQ. Should any of these additional items have a higher factor loading than the original SWBQ items, then the additional (new) item replaces the original SWBQ item, so that each SWBQ subscale (domain) still only has five items. The ‘new’ items were also evaluated within the theoretical context. The first factor includes items (2, 6, 11, 13 and 15) that relate to transcendental spiritual well-being. Factor two items (4, 10, 20, 22 and 24 – items 22 and 24 replace items 7 and 12) relate to environmental spiritual well-being. Factor three items (1, 8, 19, 21 and 26 – items 21 and 26 replaces items 3 and 17) relate to communal spiritual well-being and factor four items (5, 9, 14, 16 en 18) relate to personal spiritual well-being. Table 3 clearly indicates that items that have a high loading on a certain (specific) factor, do not also have high loadings (no loading is higher than 0,22) on any of the other factors. The factor intercorrelations vary between 0,19 en 0,37. Based on exploratory factor analysis and subsequent parallel analysis, a four factor structure for the SWBQ was suggested. The factor structure that was found in this study corresponds with the factor structure found in Gomez en Fisher’s study (2003).

### ***Confirmatory factor analysis***

To investigate the validity of the original factor structure confirmatory factor analysis was performed by means of the EQS program. The four-dimensional structure had the following goodness-of-fit statistics ( $\chi^2 = 74,93$ ;  $df = 64$ ,  $RMSEA = 0,061$ ;  $SRMR = 0,048$ ; and  $CFI = 0,934$ ). This result seems to indicate that the original four-dimensional structure associated with

the SWBQ measuring instrument is applicable to the South African situation, especially the adolescent group.

After the items as per factor were identified, the reliability of the individual spiritual well-being (subscales) as well as the total score of the SWBQ was examined. The results are discussed in the following paragraph.

**Table 3: Item-factor loading matrices for spiritual well-being**

Item	Factor 1	Factor 2	Factor 3	Factor 4
2. I feel a personal relationship with the Divine/God	,87	,01	,04	-,04
6. I feel worship of the Divine/the Creator	,84	,04	-,02	-,02
11. I feel oneness with the Divine/God	,87	,002	,03	,02
13. I feel peace with the Divine/God	,84	-,02	-,003	,09
15. I feel prayer enriches my life	,86	-,05	,01	,03
4. I feel a connection with nature	-,07	,85	-,07	,001
7. I feel awe at a breath-taking view	,12	,51	,02	,04
10. I feel oneness with nature	,04	,84	-,07	,02
12. I feel harmony with the environment	,08	,70	,06	,004
20. I feel a sense of 'magic' in the environment	-,06	,74	,07	-,01
22. I feel a sense of amazement in nature	-,06	,84	,008	-,04
24. I feel in harmony with nature	-,005	,83	-,005	,04
1. I feel a love for other people	,05	,004	,75	-,14
3. I feel forgiveness towards others	,07	,08	,51	-,04
8. I feel trust between individuals	-,09	-,02	,72	,02
17. I feel respect for others	,11	,02	,56	,04
19. I feel kindness towards other people	,11	,08	,68	-,05
21. I feel a connection between myself and others	-,02	,03	,61	,18
23. I feel I live in harmony with others	,007	,06	,55	0,19
26. I feel I have confidence in people	-,08	-,11	,71	,13
5. I feel a sense of identity	,06	-,06	-,19	,80
9. I feel self-awareness	,04	,03	,03	,68
14. I feel joy in life	-,10	,02	,22	,62
16. I feel inner peace	,16	,12	,19	,56
18. I feel meaning in life	,09	,004	,13	,66
25. I feel inner strength	-,004	,17	,08	,47

## **Reliability**

The internal consistency for the different subscales (factors) as well as the global score of the SWBQ was calculated using Cronbach's  $\alpha$ -coefficients with the use of the SPSS-computer programme (SPSS Incorporated, 2003). The coefficients are indicated in Table 4 below. In calculating the internal consistency of the different subscales, a distinction was made between the two main language groups since the SWBQ items were translated from English to Afrikaans and administered in these two languages.

**Table 4: Cronbach's  $\alpha$ -coefficients for the subscales and the total score of the SWBQ**

Instrument/scale	A-coefficients	
	Afrikaans	English
Environmental	0,840	0,941
Transcendental	0,852	0,893
Communal	0,753	0,808
Personal	0,721	0,782
Total score	0,888	0,878

Table 4 clearly indicates acceptable coefficients for both language groups for all the subscales as well as the total score. The subscale, personal spiritual well-being indicates a slightly lower reliability coefficient in relation to the other subscales.

## **Summary**

A number of the items of the original SWBQ instrument were adapted in line with certain concerns raised by Gomez and Fisher (2005a). The terminology was changed for a number of items and items were added to the original list. Of the additional items, three explored the communal domain, two explored the environmental domain and one explored the personal domain. All these items emerged from Fisher's descriptions of the spiritual well-being domains (2003). In instances where the new item was found to have a higher factor loading than the original item, then it replaced the original item. Substitutions of new for old items are discussed below.

The exploratory factor loading analysis for the SWBQ items representing the transcendental and personal scales in the revised instrument did not indicate a need to substitute any of the original items (Gomez & Fisher, 2003) with the added items. The only changes made to some of the items measuring these two scales were changes in terminology, which was thought to be more appropriate for the South African adolescent sample (see Addendum A). In terms of the environmental and communal scales, changes in terminology to some of the items

were made. Also the factor loading analyses of these two scales indicated the substitution of four additional (new) items for the original items (two substitutions per domain). These substitutions, as well as the other factor analysis finding and the internal consistency of the revised scale are discussed below.

In terms of the environmental spiritual well-being scale, the items “*I feel a sense of amazement in nature*” and “*I feel in harmony with nature*” were part of the added items in the adapted version of the SWBQ. They were found to have higher factor loadings than the original items and thus replaced the original items “*I feel awe at a breath-taking view*” and “*I feel harmony with the environment*”. This was an improvement on the finding of Gomez and Fisher (2005a) that in terms of the environmental scale, the following items, namely “*connection with nature*”, “*oneness with nature*” and “*harmony with the environment*” have acceptable psychometric properties whilst the following two items, namely “*awe at a breath-taking view*” and “*sense of magic in the environment*” did not have acceptable item response theory (IRT) psychometric properties.

In terms of the communal spiritual well-being scale, the items “*I feel a connection between myself and others*” and “*I feel I have confidence in people*” were part of the added items in the adapted version of the SWBQ. They were found to have higher factor loadings than the original items and thus replaced the items “*I feel forgiveness towards others*” and “*I feel respect for others*”. This was a definite improvement on the finding of Gomez and Fisher (2005a) that for the communal scale only two of the items, “*respect for others*” and “*kindness towards other people*” have acceptable IRT based psychometric properties whilst the other items (“*love for other people*”, “*I feel forgiveness towards others*” and “*trust between individuals*”) were especially weak in their reliability at all trait levels.

The exploratory factor analyses also found that items that have a high loading on a certain (specific) factor do not also have high loadings on any of the other factors. The confirmatory factor structure that was found in this study corresponds with the factor structure found in Gomez en Fisher’s study (2003). The factor analyses of the adapted version of the SWBQ for a group of South African adolescents found acceptable coefficients of internal consistency for the different subscales (factors) as well as for the global score of the SWBQ.

Thus, in line with Gomez and Fisher’s (2005a) recommendation, the revised SWBQ scale presented in this study seems to have been improved in terms of its psychometric properties and appears to be a reliable instrument in measuring the spiritual well-being of adolescents.

## **Limitations and recommendations**

Participants in this study came from different cultural, religious and language groupings (although the participation prerequisite was that they had to be conversant in English or Afrikaans or both). Measures of religion and spirituality should consider the issue of cultural sensitivity since differences in religious and spiritual beliefs and practices are interwoven into other cultural aspects (Hill & Pargament, 2003). Given that the South African adolescent population comprises of different racial, religious and cultural groupings, 11 official languages (with many more dialects) and many adolescents residing in rural areas, it may be difficult to generalize this study's findings for the broader South African adolescent population. Furthermore, self report measures are prone to measurement error due to factors such as the possibility that a participant(s) may not properly understand the instructions in the assessment instrument, retrospective recall bias and problems with accuracy of reporting. In addition, the use of a cross-sectional, single method design in assessing the factor validity may also be a limitation (Utsey, Lee, Bolden & Lanier, 2005).

Future South African studies on adolescent spiritual well-being could focus on different adolescent groupings mentioned above to get better insight into how those factors (religion, culture, language, rural vs. urban, etc.) influence adolescent well-being. Future studies should also include different methods in gaining data, such as including qualitative research components to get a deeper understanding of contextual issues, given the complexity of the spiritual well-being construct.

## REFERENCES

- Adams, T., Bezner, J., & Steinhardt, M. (1997). The conceptualisation and measurement of perceived wellness: Integrating balance across and within dimensions. *American Journal of Health Promotion, 11*(3), 208-218.
- Argyle, M., & Hills, P. (2000). Religious experiences and their relations with happiness and personality. *The International Journal for the Psychology of Religion, 10*(3), 157-172.
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J.P. Forgas, & J.M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp.189-203). North Holland: Elsevier Science Publishers.
- Benson, P.L., Roehlkepartain, E.C., & Rude, S.P. (2003). Spiritual development in childhood and adolescence: Toward a field of inquiry. *Applied Developmental Science, 7*(3), 205-213.
- Bentler, P.M. (2006). *EQS 6 Structural Equations Program manual*. Encino, CA: Multivariate Software, Inc.
- Brinbaum, A. (1968). Some latent trait models and their use in inferring an examinee's ability. In F.M. Lord & M.R. Novick (Eds.), *Statistical theories of mental scores*. Reading, MA: Addison-Wesley.
- Cross, H.D. (1994). An adolescent health and lifestyle guidance system. *Adolescence, 29*(11), 267-277.
- Emberston, S.E., & Reise, S.P. (2000). *Item response theory for psychologists*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Elkins, D.N., Hedstrom, L.J., Hughes, L.L., Leaf, J.A., & Saunders, C. (1988). Toward a humanistic phenomenological spirituality: Definition, description and measurement. *Journal of Humanistic Psychology, 28*(4), 5-18.

- Ellison, C.W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11(4), 330-340.
- Emmons, R.A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Gilford Press.
- Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL. : Thomas.
- Fisher, J. (2000). Being human, becoming whole: understanding spiritual health and well-being. *Journal of Christian Education*, 43(3), 37-52.
- Fisher, J.W., Francis, L.J., & Johnson, P. (2000). Assessing spiritual health via four domains of spiritual well-being: the SH4DI. *Pastoral Psychology*, 49(2), 133-145.
- Glik, D.C. (1990). Participation in spiritual healing, religiosity and mental health. *Sociological Inquiry*, 60(2), 158-176.
- Gomez, R., & Fisher, J. W. (2003). Domains of spiritual well-being and development and validation of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences*, 35, 1975-1991.
- Gomez, R., & Fisher J.W. (2005a). Item response theory analysis of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences*, 38, 1107-1121.
- Gomez, R., & Fisher J.W. (2005b). The Spiritual Well-Being Questionnaire: Testing for model applicability, measurement and structural equivalencies and latent mean differences across gender. *Personality and Individual Differences*, 39(8): 1383-1393.
- Hall, T.W., & Edwards, K.J. (1996). The initial development and factor analysis of the Spiritual Assessment Inventory. *Journal of Psychology and Theology*, 24(3), 233-246.
- Hill, P.C., & Pargament, K.I. (2003). Advances in the conceptualization and measurement of religion and spirituality: implications for physical and mental health research. *American Psychologist*, 58(1), 64-74.

- Hodges, S. (2002). Mental health, depression, and dimensions of spirituality and religion. *Journal of Adult Development, 9*(2), 109-115.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika, 30*, 179-185.
- Hungelmann, J., Kenkel-Rossi, E., Klassen, L., & Stollenwerk, R. (1996). Focus on spiritual well-being: Harmonious interconnectedness of mind-body-spirit-Use of the JAREL Spiritual Well-Being Scale. *Geriatric Nursing, 17*(6), 262-266).
- Kelly, E.W. (1995). *Spirituality and religion in counseling and psychotherapy: Diversity in theory and practice*. Alexandria, V.A: American Counseling Association.
- Lippman, L.H., & Keith, J.D. (2006). The demographics of spirituality among youth: International perspectives. In E.C. Roehlkepartain, P. E. King., L. M. Wagener & P. L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 109-123). Thousand Oaks, CA: Sage Publications.
- MacDonald, D.A. (2000). Spirituality: Description, measurement and relation to the five factor model of personality. *Journal of Personality, 68*(1), 153-197.
- Maltby, J., & Day, L. (2001a). Spiritual involvement and belief: The relationship between spirituality and Eysenck's personality dimensions. *Personality and Individual Differences, 30*, 187-192.
- Maltby, J., & Day, L. (2001b). The relationship between spirituality and Eysenck's personality dimensions: a replication among English Adults. *Journal of Genetic Psychology, 162*(1), 119-123.
- McKee, D. D., & Chappel, J.N. (1992). Spirituality and medical practice. *Journal of Family Practice, 35*(2), 201-208.
- Pargament, K.I. (1997). *The Psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.

- Polanski, P.J. (2002). Exploring spiritual beliefs in relation to Adlerian Theory. *Counseling and Values, 46*, 127-136.
- Reich, K. H. (1996). A logic-based typology of science and theology. *Journal of Interdisciplinary Studies, 8*, 149–167.
- Samejima, F. (1969). Estimation of latent trait ability using a response pattern of graded scores. *Psychometrika Monograph Supplement*, no. 17.
- SAS Institute (2003). *SAS user's guide: Statistics version 8.2 edition*. Cary: Author.
- Singleton, A., Mason, M., & Webber, R. (2004). Spirituality in adolescence and young adulthood: A method for a qualitative study. *International Journal of Children's Spirituality, 9*(3), 247-262.
- Skevington, S.M., Mac Arthur, P., & Somerset, M. (1997). Developing items for the WHOQOL: An investigation of contemporary beliefs about quality of life related to health in Britain. *British Journal of Health Psychology, 2*, 55-72.
- Sorokin, P. (1947). *Society, culture and personality*. New York: Harper & Row.
- SPSS Incorporated (2003). *SPSS user's guide: Version 12.0*. New York: Author.
- Tloczynski, J., Knoll, C., & Fitch, A. (1997). The relationship among spirituality, religious ideology and personality. *Journal of Psychology and Theology, 25*(2), 208-213.
- Utsey, S.O., Lee, A., Bolden, M.A., & Lanier, Y. (2005). A confirmatory test of the factor validity of scores on the spiritual well-being scale in a community sample of African Americans. *Journal of Psychology and Theology, 33*(4), 251-257.
- Vella-Brodrick, D.A., & Allen, F.C.L. (1995). Development and psychometric validation of the mental, physical, and spiritual well-being scale. *Psychological Reports, 77*, 659-674.

Wagener, L.M., & Malony, H.N. (2006). Spiritual and religious pathology in childhood and adolescence. In E.C. Roehlkepartain, P. E. King., L. M. Wagener & P. L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 137– 149). Thousand Oaks California: Sage Publication, Inc.

Wallace, J.M., Forman, T.A., Caldwell, C.H., & Willis, D.S. (2003). Religion and U.S. secondary school students: Current patterns, recent trends, and sociodemographic correlates. *Youth & Society*, 35(1), 98-125.

Zinnbauer, B. J., Pargament, K. I., Cole, B.; Rye, M. S., Butter, E. M. Belavich, T. G., Hipp, K. M., Scott, A.B., & Kadar, J.L.. (1997). Religion and spirituality: Unfuzzifying the fuzzy. *Journal for the Scientific Study of Religion*, 36(4), 549-564.

## ADDENDUM A

<b>Original SWBQ</b>	<b>SWBQ adapted for South African adolescents</b>
Spirituality can be described as that which lies at the heart of a person being human. Spiritual health can be seen as a measure of how good you feel about yourself and how well you relate to those aspects of the world around you which are important to you.	We want to know how you feel about yourself, others, the environment and your relationship with a spiritual or divine force/God
<b>I feel</b>	<b>I feel</b>
1. a love of other people	a love for other people
2. a personal relationship with the Divine/God	a personal relationship with the Supreme Being/God (a divine force)
3. forgiveness towards others	
4. connection with nature	a connection between myself and nature
5. a sense of identity	I have an understanding of my identity (I know who I am)
<b>I feel</b>	<b>I feel</b>
6. worship of the Creator	a reverence for the Creator (a divine force)
7. awe at a breath-taking view	respect when I see a breathtaking view
8. trust between individuals	confidence in others
9. self-awareness	I have insight into myself as a person
10. oneness with nature	one with nature
<b>I feel</b>	<b>I feel</b>
11. oneness with God	one with God (a divine force)
12. harmony with the environment	in harmony with the environment
13. peace with God	at peace with God
14. joy in life	
15. prayer life	that prayer enriches my life
<b>I feel</b>	<b>I feel</b>
16. inner peace	
17. respect for others	
18. meaning in life	
19. kindness towards other people	goodwill towards other people
20. a sense of 'magic' in the environment	a sense of 'fascination' in the environment
	<b>I feel</b>
	a connection between myself and others
	a sense of amazement in nature
	I live in harmony with others
	in harmony with nature
	inner strength
	I have confidence in people

## **ARTICLE II: *The role of age, gender and specific religious variables in the coping of adolescents***

*This study investigated whether there were statistically meaningful associations (using Scheffé tests to determine effect sizes) between the coping strategies used by adolescents and the variables of age, gender, importance of religion/ spirituality, attendance of church activities and frequency of prayer. The sample comprised of 1283 high school learners located in the metropole of Cape Town, South Africa. The results are as follows: females used the “developing social support” coping strategy much more than males, older adolescents used the “avoiding problems” coping strategy more than younger adolescents, an inverse correlation was found between the “avoiding problems” coping strategy and an increase in the “importance of religion” variable, a positive correlation was found for the three dimensions of religion/spirituality (importance of religion/spirituality, frequency of church attendance and frequency of prayer) and the “seeking spiritual support” coping variable.*

The relatively new democratic order in South Africa has offered much promise and opportunity in developing the potential of its citizens. It has also been accompanied by many challenges, such as the crime rate, high levels of unemployment and the skills shortage. Much of the country’s future success will depend, to a large extent, on its will and capacity to develop the potential of the current generation of adolescents (and children) – from whence will emerge the country’s next generation of leaders. However, recent indications of the status of adolescent behaviours are a cause for concern. For example, the South African Government tasked the Medical Research Council (MRC) to carry out a national youth risk behaviour survey in 2002. The number of participants were 10 699, drawn from grades 8-11 at 188 public schools and across all nine provinces of the country. Some of the survey’s findings are summarized below.

Participants reported that in the month preceding the survey, 16,7% of learners carried a weapon such as a gun, knife, panga or kierrie. In the six months preceding the survey, 41,0% of the learners reported being bullied, 30,2% were involved in a physical fight, and 14,3% had been members of gangs. In their lifetime, 9,8% of learners had been forced to have sex, while 8,3% had forced someone else to have sex. In the six months preceding the survey, 1 in 4 learners (24,6%) had stopped doing some usual activities for two weeks or more in a row as a result of feeling so sad or hopeless. One in 5 learners (19,0%) considered attempting suicide, 15,8% of learners made plans to commit suicide, and 17% attempted suicide on one or more occasions. In terms of smoking cigarettes, 1 in 5 learners (21,1%) were current smokers. Nationally, 1 in 2 learners (49,1%) had drunk at least one drink of alcohol in their lifetime. In the 30 days preceding the survey, 31,8% used alcohol on one or more days, while 23,0% had had five or more drinks within the space of a few hours on one or more days. The percentage of learners

who reported ever having used dagga was 12,8%, while 9,1% of learners had used dagga in the month preceding the survey. In terms of ever having used other drugs illegally, Mandrax use was 6,0%, cocaine use was 6,4%, heroin use was 11,5%, the use of club drugs was 5,8%, and use of over-the-counter or prescription drugs 15,5%. Nationally 41,1% of learners in grades 8 to 11 reported having had sex with 54,0% of that group, reporting having had more than one sexual partner in their lifetime. Of learners who had sex, 7,4% had experienced a sexually transmitted infection (Reddy et al., 2003).

Indications such as those mentioned above are disconcerting and necessitate research with adolescents. Hopefully, such research will provide further knowledge in refining developmental as well as intervention measures that nurture the holistic development of adolescents. With this idea in mind this study aims to investigate how adolescents' coping behaviours are influenced by the biographical variables of age and gender as well as the religious/spiritual variables of importance of religion, frequency of church attendance and frequency of prayer. Previous research (Eschenbeck, Kohlmann & Lohaus, 2007; Williams & McGillicuddy-De Lisi, 2000) suggests that gender and age play a role in the coping behaviours adopted by adolescents. Similarly religion/spirituality also seems to play a role in the coping behaviours used by adolescents (e.g., Smith, 2003). A discussion of the concept of coping follows.

### **Adolescent coping**

During the various stages of life, coping with stress is different, probably because the individual faces different and varied challenges at different stages of his/her life. The adolescent phase is marked by several challenges such as forming relationships with peers, differentiating from family and moving towards an adult identity (Richaud de Minzi, 2003). Adolescents experience changes in their environment such as heightened scholastic achievement expectations, expanded peer relations, including relations with the opposite sex and family relations that are in the process of being revised and renegotiated (Feldman, Fisher, Ransom & Dimiceli, 1995). During the adolescent phase coping is a means of adapting to the competing demands made by the biological, emotional and social stresses which occur during this period of development. Coping behaviours indicate how adolescents cope with their stresses (Frydenberg & Lewis, 1991). The coping behaviours of adolescents therefore play an important role during the process towards autonomy and psychosocial competence (Byrne, 2000; Erikson, 1968). Coping is essentially a transactional process of exchange and encounter between the individual and a situation within a larger milieu. The coping process virtually involves every dimension of human functioning. This includes the affective, cognitive, behavioural and psychological

dimensions. It is also not limited to only what occurs within the individual, it occurs within a larger context of relationships and settings (Pargament, 1997). The most widely used definition of coping is suggested by Lazarus and Folkman (1984) who define coping as “*constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person*” (p. 141). Since cognitive development during adolescence is characterized by the development of abstract thinking, adolescents’ coping strategies include a range of cognitive styles and abilities, reflecting various levels of concrete and abstract thinking. A range of coping behaviour arises in response to stresses and varies from adaptive to maladaptive styles of coping.

Although a broad definition of coping is useful in differentiating between coping and other stress responses, it does not adequately reflect the different types of coping responses. There has been no clear consensus regarding the basic dimensions of coping that best discriminate among different coping strategies in childhood and adolescence (Compas, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001). Below follows a brief overview of the most commonly used conceptualisations of coping dimensions in research.

### **Dimensions of coping**

The most widely used dimensions of coping are problem- versus emotion-focussed coping (Compas, Malcarne & Fondacaro, 1988), approach versus avoidance coping and primary versus secondary control coping (Compas et al., 2001; Ebata & Moos, 1994). Although these models of coping do have some similarities and overlap in the categorization of specific coping responses; they are conceptually distinct (Ebata & Moos, 1994).

The problem-versus emotion focused model organizes coping responses in terms of their hypothesized function (Ebata & Moos, 1994). Problem focused coping responses can be seen as attempts to modify a stressor. Emotion-focused coping responses can be seen as attempts to manage or regulate emotional states that may accompany or result from a stressor. Ebata & Moos (1994) consider problem-focused coping strategies to be approach-oriented. However, they also view approach coping to be broader because it may also include coping responses that function to regulate affect. For example, although focussing on the potential benefits of a problem might be considered as emotion-focussed because it is used to feel better about a situation, it may also be considered as an approach-method because it is an active attempt to deal cognitively with the situation by exploring different aspects of the stressor. On the other hand, trying to forget about a situation or denying a problem, would be considered an avoidance strategy. Compas, Orosan and Grant (1993) further explain the difference between problem-focussed and emotion-focussed strategies. They describe emotion-focused strategies as efforts to

manage or reduce distress. These strategies involve problem avoidance through ignoring the issue, withdrawal, or expressing negative feelings. Problem-focused coping strategies (e.g., obtaining instrumental as well as social support, and creating cognitive plans to address the issue), involve making decisions and planning solutions that manage or remedy the problem.

The approach-avoidance model organizes coping responses in terms of their focus or whether they are directed toward or away from the stressor. Approach-oriented strategies include cognitive efforts to understand and alter ways of thinking about the stressor and behavioral attempts at resolving the stressor by dealing directly with it or its consequences. Avoidance strategies include cognitive attempts to deny or minimize the stressor and behavioural attempts to withdraw from or avoid the stressor, to relieve tensions by expressing emotions and to seek alternative sources of pleasure (Compas et al., 2001).

The primary versus secondary control dimension of coping refers to the orientation of an individual to either enhance a sense of personal control over the environment and his/her reactions (personal control) or to adapt to the environment (secondary control). Primary control coping attempts are directed towards influencing objective events or conditions (e.g., problem solving) or directly regulating ones emotions. Secondary control coping attempts involve efforts in adapting to the environment and typically may include acceptance or cognitive restructuring (Compas et al., 2001).

Broad dimensions of coping are considered to be composed of specific subtypes of coping. Examples of these subtypes or categories of coping are: ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being humorous, avoiding problems and relaxing. Research involving the measurement of coping usually consists of items that reflect these categories of coping (Compas et al., 2001; Patterson & McCubbin, 1981). Adolescent coping styles and strategies are influenced by a number of socio-demographic factors such as: age (experience), gender, intellect, family resources and support from parents and others (Frydenberg & Lewis, 1991). For the purposes of this paper the factors of age, gender as well as certain religiosity variables (importance of religion, church attendance and frequency of prayer) will be briefly discussed.

### **Gender and coping strategies.**

Research has reported mixed findings concerning gender differences in the use of coping strategies among children and adolescents (Byrne, 2000; Compas et al., 2001). Since there are a variety of definitions and measurements of coping, different stressors, different age groups and different age ranges, it is difficult to compare different studies on stress and coping. Therefore,

factors that might influence the inconsistencies with regard to gender differences in coping strategies in children and adolescents should be addressed. Byrne (2000) found that by the age of 12 years boys and girls were using different coping strategies. Boys were also more successful in reducing both anxiety and fear. In terms of the types of coping strategies the most consistent results were found for gender differences within the three coping strategies: seeking social support (females > males), problem solving (females > males), and avoidant coping (tendency: males > females), respectively (Eschenbeck et al., 2007). Studies have also found that adolescent females reported using a broader range of coping strategies more frequently than did males (Kausara & Munir, 2004; Patterson & McCubbin, 1987; Wilson, Pritchard & Revalee, 2005). In addition, female adolescents have typically reported a higher use of seeking social support as a coping strategy than males (Copeland & Hess, 1995; Ebata & Moos, 1994; Eschenbeck et al., 2007; Frydenberg & Lewis, 1993; Hamid, Yue & Leung, 2003; Hampel & Petermann, 2005; Kavšek & Seiffge-Krenke, 1996; Patterson & McCubbin, 1987; Piko, 2001; Roecker, Dubow & Donaldson, 1996; Seiffge-Krenke & Shulman, 1990). Several studies have found that boys consistently use more avoidance coping strategies, and girls use significantly more approach coping strategies (Causey & Dubow, 1992; Hamid et al., 2003; Herman-Stahl, Stemmler & Petersen, 1995). Boys tended to use blaming self/others and avoidance strategies more often whilst girls tended to rely on social resources more often when encountering problems (Hamid et al., 2003). Chapman and Mullis (1999) found that female adolescents scored higher than males in terms of the coping strategies of self-reliance, social support, seeking spiritual support, and engaging in demanding activities.

### **Age as a factor in adolescent coping**

Major hormonal and bodily changes influence adolescents' self-image and can impact on psychological variables such as self-esteem and self-efficacy. These changes have the potential for creating uncertainty in adolescents and those who interact with them (Hess & Richards, 1999). Adolescents face more stressors and also more negative life events (Larson & Ham, 1993). The intensity and quantity of these experiences therefore create the need for the acquisition of coping strategies (Hess & Richards, 1999). The development of coping skills occurs at various stages of growth and is (to an extent), unique to the individual. The transition from late childhood to early adolescence is characterized by puberty and school transitions while older adolescents are faced with stress relating to dating, sex, career choices and unfolding autonomy from their parents. Children entering puberty and progressing through adolescence, develop a range of coping behaviours that vary from adaptive to maladaptive (Hess & Richards, 1999). Coping styles that evolve during early and mid- adolescence are based on earlier

experiences and influence how an individual will deal with new stressors occurring in late adolescence and emerging adulthood (Seiffge-Krenke, 2006). This point is further emphasized by Williams and McGillicuddy-DeLisi (2000) who are of the view that coping strategies used by adolescents are likely to vary as the individual matures due to cognitive advances and with the particular life demands and social supports that are characterise early, middle, and late periods of adolescence. Analysis of age differences in coping suggests that there is not a simple linear correspondence between increasing age through the adolescent years and the development of coping skills. However, there is considerable evidence that changes do occur during this period. Prior research indicates that that both the stressor type as well as gender may play a role in the developmental pattern of coping behaviours (Williams & McGillicuddy-De Lisi, 2000). The difficulty in making simplistic generalizations about the association between age and the use of coping strategies during the different phases of adolescence is highlighted by the findings of the studies mentioned below.

Oxley (1996) found a significant positive correlation between age and the coping behaviour of *seeking diversions* and a significant negative correlation with the coping behaviour *relaxing* in a group of female adolescents ranging in age from 13 to 20 years. Ebata & Moos (1994) examined the possible influence of personal, situational and contextual factors in predicting approach- and avoidance-coping responses to naturally occurring stressors during adolescence. Their findings indicated that older adolescents used more of all approach-coping dimensions (*logical analysis, positive reappraisal, guidance/support & problem solving*) as well as one avoidance dimension (*resigned acceptance*). Age effects were the largest for two dimensions, *logical analysis* and *positive reappraisal* that are clearly cognitive responses. Stern and Zevon (1990) found that, when dealing with stressors related to interpersonal or family conflicts, younger adolescents used more emotion-focussed coping than older adolescents. In particular, younger adolescents were more likely to use *wishful thinking, denial* or *distancing*, and tension-reducing responses. Conversely Compas et al. (1993) found that emotion-focused coping strategies increase in frequency through adolescence, whilst problem-focussed coping strategies, which have already emerged by adolescence, seem not to change in a consistent manner over the course of middle to late adolescence. Frydenberg and Lewis (1993) found that younger adolescents used direct forms of coping (e.g. hard work) more than older adolescents who used strategies such as self blame and tension management more. Seiffge-Krenke (1993) found that gender differences were more significant than age effects in the use of coping strategies. She also reported an increasing use of active coping and internal coping with age. However, specific forms of active coping such as having discussions with parents and adults declines with age, whilst developing social support increases with age. Fields and Prinz (1997)

reviewed previous research (published 10 years prior) related to child and adolescent strategies for coping with commonly occurring stressors. When reviewing the use of coping strategies among different adolescent age groups, they found a decreased use of behavioural distraction strategies and an increased use of cognitive distraction strategies with age. There were also suggestions that early adolescents tended to use more emotion-focussed strategies than problem focused strategies, whilst the opposite was true for later adolescents/young adults.

Skinner and Zimmer-Gembeck (2007) succinctly highlighted the importance of brain development and maturation by drawing attention to the following point. When considering that the important developmental tasks undertaken during adolescence as well as recent research in adolescent brain development, the capacity to use particular strategies under stress (e.g. strategizing, decision making, planning and reflection) may not fully emerge until late adolescence or early adulthood. As adolescents get older their enhanced cognitive development, autonomy, and a wider range of social interactions probably converge to account for increases in planful and action-oriented methods of coping and greater flexibility in coping (Hoffman, Levy-Schiff, Sohlberg & Zarizki, 1992).

### **Conceptualising spirituality and religion**

Despite much contribution over the years, little consensus has been reached about what the terms *spirituality* and *religion* actually mean (Zinnbauer et al., 1997). Some scholars support the view that there is significant overlap between religion and spirituality, but that both religion and spirituality have dimensions that fall beyond the domain of the other (Benson, Roehlkepartain & Rude, 2003; Davis, Kerr, & Robinson Kurpius, 2003). Other scholars such as Pargament (1997) consider religion to be the broader concept of the two. Another group of scholars such as Hodges (2002) consider spirituality to be broader than religion. To Hodges (2002) spirituality represents transcendent beliefs and values that may or may not be related to a religious organization. Spirituality may be expressed in a religious context but a person's religiosity is not always as a result of spirituality. Religiosity, in turn, refers to rituals and creeds which may be expressed in the context of a religious institution. In offering their definition of spirituality, Singleton, Mason and Webber (2004) emphasize that they make no claim that theirs is a definitive definition of the concept. Rather, they offer a stipulative definition of this complex concept in terms of what spirituality means in their study.

Given the views of Zinnbauer et al., (1997), and the stipulative stance taken by Singleton et al. (2004), for the purposes of this study, the writer adopts the view that there is significant overlap between spirituality and religion (Benson et al., 2003; Davis, Kerr et al., 2003), and that

spirituality is broader than religion (Hodges, 2002). Thus, the terms spirituality and religion will be used interchangeably in this article.<sup>1</sup>

### **Religion/spirituality and adolescent well-being**

Studies focussing on adolescence and religion/spirituality generally indicate that religion still plays a role in the lives of many adolescents. Wallace, Forman, Caldwell and Willis (2003) investigated the presence of religion in the lives of American adolescents by using data of about 80 000 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> grade high school students of 1998 and 1999 from the University of Michigan's Monitoring the Future study. Males and females were almost equally represented. The findings indicated that approximately 60% of U.S. young people felt that religion was "pretty" or "very important". About 50% attended church services regularly (monthly or more) and the vast majority (more than 80%) reported an affiliation with a specific religion. In terms of gender, males reported that religion was less important, attended services less often, and were more likely to be unaffiliated with a religious organization in comparison with girls. In terms of age there was a decline in church attendance and importance of religion from younger to older students.

Findings of empirical studies have consistently indicated that religious coping strategies are some of the ways in which people cope with stress. In addition, religious coping has been shown to mediate the relationship between stress and psychological as well as physical health in relation to a variety of stressors (Schaefer & Gorsuch, 1993). Religious involvement may promote the successful mastery of adolescent developmental tasks and also act as a protective factor in reducing problem behaviours (Schludermann, Schludermann & Huynh, 1997). Smith (2003) asserts that religion may provide American adolescents with extra or more effective coping mechanisms for negotiating and addressing their mental, emotional, and interpersonal stresses and problems. This is because religions often offer youth a variety of behavioural and cognitive resources to deal with mental, emotional and interpersonal life stressors. These resources may include practices such as prayer, meditation, confession, forgiveness, reconciliation small-group sharing, cleaning rituals and funeral rites. Regnerus (2003) in a review of religious research on positive adolescent outcomes, concluded that researchers studying adolescents largely concur that religion can influence adolescents and that many adolescents are themselves religious. In general religion has been found to have a positive influence and contributes to better educational outcomes, better emotional health, more satisfaction in the family and more voluntarism. In terms of adolescent risk behaviours, such as

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<sup>1</sup> Since the writer is using the concepts *spirituality* and *religion* interchangeably, the use of the concepts *religious* and *spiritual* will also be used interchangeably in this paper.

drinking alcohol, drug use and sex, religion appears to have a protective influence and also distinguishes (to a greater or lesser extent) between those adolescents that participate in such behaviours and those that do not (Regnerus, 2003). Other studies such as Nonnemaker, McNeely and Blum (2003); Sinha, Cnaan and Gelles (2007); Heath, Madden, Grant, McLaughlin, Todorov and Bucholz (1999); Milevsky and Levitt (2004) as well as Good and Willoughby (2006) also found evidence that religiosity is protective for a number of adolescent health-related outcomes. In general, research indicates that religious effects on families seem to be positive. In a unique study, Regnerus and Burdette (2006) used data from the National Longitudinal Study of Adolescent Health (Add Health) to investigate the particular influence of adolescent religious change on the dynamics of their relationships with their parents, and overall satisfaction with their families. The findings suggested that growth in adolescents' personal religious salience (the extent to which religion is important in adolescents' lives) is uniquely and consistently related to better family relations, even after accounting for risky behaviours such as excessive drinking and drug abuse that are detrimental to both religiosity and family relations.

In line with the focus of this study a brief discussion of research particularly relating to each of the spiritual/religious dimensions - importance of religion/spirituality to adolescents, frequency of adolescent church attendance and adolescent frequency of prayer will ensue.

### **Importance of religion/spirituality and adolescent well-being**

Many studies have indicated that the importance of religion/spirituality to the individual does seem to have an influence on the lives and lifestyles of adolescents (to a greater or lesser extent). For example, Wills, Yaeger and Sandy (2003) found inverse correlations of religiosity with adolescents' alcohol, tobacco, and marijuana use. Similarly, Heath et al. (1999) found that adolescents who felt that it was unimportant or only somewhat important to be guided by religious values were at a much higher risk for the onset of smoking and alcohol use, than those who thought that it was very important to be guided by religious values. Fehring, Cheever, German and Philpot (1998) found that a high rating of importance of faith predicted (together with orthodox beliefs and participation in organized religious activities) less permissive sexual attitudes among older adolescents. Sinha et al. (2007) found that the perceived importance of religion was significantly associated with eight out of ten youth risk behavior variables. These variables were smoking, alcohol use, truancy, interpersonal violence, sexual activity, marijuana use, depression and suicide ideation. Pearce, Little and Perez (2003) found that self ranking religiousness (as well as religious attendance) were particularly negatively correlated with depressive symptoms in adolescents. Walker, Ainette, Wills and Mendoza (2007) found inverse

indirect effects of personal religiosity (measured in terms of importance, value, spirituality, forgiveness) on substance use, in middle and high school students.

### **Frequency of church attendance and adolescent well-being**

The frequency of attending religious services is perhaps the most widely used indicator of religiosity, despite it representing only one of several dimensions of religiosity among youth. In addition, religious attendance is an essential part of most conceptual definitions of religiosity (Holder, Durant, Harris, Daniel, Obeidallah & Goodman 2000). Loury (2004) found that church attendance during adolescence significantly increases the number of years of schooling that individuals obtain. It implies that variation in church attendance, either due to changes in attitudes, demographic characteristics, or government or other institutional activity, may have spill-over effects on socioeconomic variables such as level of education in addition to the extensively documented effects on subjective well-being. More frequent church attendance predicted higher self-esteem (McMahon, Singh, Lakeasha, Garner & Benhorin, 2004). Siegrist (1996) found indications that church attendance and catholicism decreased support for suicide. Ball, Armistead and Austin (2003) found that the more frequently adolescents attend church services, the less likely they are to be engaging in sexual activity. Regnerus (2002) analysed religious socialization in relation to schooling success amongst metropolitan United States high school sophomore students. He found that participation in church activities had a positive relationship with both heightened educational expectations and math and reading achievement, even when controlling for variables that often show religious effects to be spurious. These findings were consistent regardless of ecological context (socio-economic background). Demir and Urberg (2004) found that church attendance was positively related with happiness and negatively with depressed mood amongst adolescents. This meant that those adolescents who attended church more frequently were happier and less depressed than adolescents who were not attending church frequently. The findings were true for both males and females. Rostosky, Wilcox, Wright and Randall (2004) also concluded that generally, survey findings indicate a significant decline in regular participation in worship services during the adolescent years. This is more so for males than females.

### **Frequency of prayer and adolescent well-being**

Nonnemaker et al. (2003) used data from the National Longitudinal Study of Adolescent Health (Add Health) to study the relationship between different domains of religiosity and adolescent health risk behaviours. One of their findings was that only private religiosity, measured in terms of the frequency of prayer (and importance attributed to religion) was

significantly associated with a lower probability of having had suicidal thoughts or having attempted suicide. Maharajh, Ali and Konings (2006) found that both prayer as well as attendance at a religious institution with the family resulted in lower depression rates in adolescents. Fehring et al. (1998) found that prayer (as well as church attendance and prayer services) were the religious variables most associated with less sexual activity among a group of older adolescents. Francis and Evans (1996) examined the relationship between personal prayer and purpose in life among churchgoing and non-churchgoing twelve-to-fifteen-year olds. Two samples were used. The first comprised of males and females who had never attended church. The second sample comprised of males and females who attended church most weeks. The findings indicated that in both samples girls were more likely to pray than boys. Data indicated a positive relationship between frequency of personal prayer and perceived purpose in life in both groups.

Based on the above review of the literature and the aim of this research the following research question can be asked. What is the role of age, gender and specific religious variables in the coping of adolescents? To answer this question the following research method will be used.

## **RESEARCH METHOD**

### ***Participants***

The total sample comprised 1283 grades 8 to 12 learners from 10 public high schools located in the metropole of Cape Town, South Africa. The participant schools were firstly identified by categorizing all schools in terms of medium (language) of instruction. This resulted in three categories of schools, namely: English medium, Afrikaans medium and dual (English & Afrikaans) medium schools. Thereafter a random selection, as per category, was done to identify: three English, three Afrikaans and four dual-medium schools for participation in the study. Finally, convenience sampling was used within each of the participant schools. Participants ranged in age from 13-20 years. Since language could have been a significant factor in the (South African) context of this study, it was decided to only include responses of participants whose home languages were either English or Afrikaans or both in the final study. An analysis of participants' home language(s) revealed that 99 learners' home languages were neither Afrikaans nor English, nor both. They were therefore excluded from the final study. The final sample thus consisted of 1184 participants. The frequency distribution of the participants in terms of age, gender and specific religious variables that were examined by the study is indicated in Table 1.

**Table 1: Frequency distribution of participants in terms of age, gender and religious variables**

Variable	N	%
<b>Age:</b>		
13-14 years	360	30,4
15-16 years	474	40,0
17 and older	341	28,8
No response	9	0,8
<b>Gender:</b>		
Male	544	45,9
Female	639	54,0
No response	1	0,1
<b>Importance of religion</b>		
Extremely	452	38,2
Very	428	36,1
Somewhat	181	15,3
Little or not at all	122	10,3
No response	1	0,1
<b>Attendance: church activities</b>		
Once a week	736	62,2
Once a month	144	12,2
Ever three to six months	197	16,6
Never	106	8,9
No response	1	0,1
<b>Regularly pray</b>		
Once or twice a day	405	34,2
Regularly	321	27,1
Sometimes	290	24,5
Seldom or never	167	14,1
No response	1	0,1

Participants were grouped in terms of three age cohorts, 13-14 year-olds, 15-16 year-olds; and 17 years or older. The youngest age cohort represented 30,4%, the middle age group represented 40 % and the oldest age group 28,8% of the sample. In terms of gender 45,9% were males and 54 % were females. One learner did not indicate his/her gender. There was therefore a relatively equal gender distribution of participants in this study. In terms of importance of religion, 38,2% reported that religion was extremely important to them, 36,1% reported that religion was very important to them, 15,3 % reported that religion was somewhat important to them, and 10,3% reported that religion was little or not at all important to them. Thus, the

majority of participants (74,3%) indicated that religion was of significant (*very* and *extremely*) importance to them. In terms of church attendance<sup>2</sup>, 62,2% participants reported church attendance at least once a week, 12,2% once a month, 16,6% every three to six months and 8,9% reported never attending church. Thus, more than half the participants indicated that they attended church at least once a week. In terms of frequency of prayer 34,2% of the participants reported praying once or twice a day, 27,1% reported praying regularly, 24,5% reported praying sometimes, and 14,1% reported seldom or never praying. Therefore, more than half the participants indicated that they prayed at least regularly.

### ***Procedure***

Permission to conduct the study was obtained from the Western Cape Education Department on the following conditions. The principals of the identified schools also had to give their consent and determine suitable times at the respective schools for the study to be conducted. The schools identified possible participants, who had to agree to participate voluntarily in the study. Participants were required to complete a questionnaire. The time allocated for the completion of the questionnaires was between 40 and 50 minutes of duration. The researchers were assisted by class teachers in the administration of the questionnaires. During this process, the researchers responded to any questions from the participants concerning items in the questionnaire. Participants were assured of anonymity and confidentiality. They were also assured that all information would only be used for the purposes of the study.

### ***Measuring instruments***

*The Adolescent Coping Orientation for Problem Experiences (A – COPE).*

The A – COPE coping inventory (Patterson & McCubbin, 1987) was used to identify the coping behaviours of participants. This instrument has 54 items designed to identify behaviours which adolescents consider helpful in managing problems or difficult situations. The instrument is an overall measure of coping and also distinguishes between 12 coping behaviours (coping subscales) grouped conceptually as: ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being humorous, avoiding problems and relaxing. Participants' responses to each of the items are scored in terms of a five-point Likert scale varying from 1 (never) to 5 (most of the time).

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<sup>2</sup> Since participants came from different religious backgrounds, '*church attendance*' was explained to mean attendance of any religious institution, where religious services are held, including places such as churches, mosques, synagogues and temples

The A-COPE was tested on a sample of 709 adolescents from a large health maintenance organisation in the USA. The internal consistency of the subscales were fair to good with alphas ranging from 0.50 to 0.75 (Patterson & McCubbin, 1987). It also has fair predictive validity with several significant correlations in predicted directions in the use of illicit substances including alcohol and marijuana (Fischer & Corcoran, 1994). In this study, raw scores and not standardized scores were used to measure the coping behaviours of participants. A high score in a particular coping behaviour (subscale) would therefore suggest a higher use of that particular coping subscale when the individual experiences problems or feels stressed.

In this study, the reliability of the A-COPE coping inventory was investigated using Cronbach's alpha ( $\alpha$ ) coefficient (SPSS Incorporated, 2001). The reliability of the instrument was calculated independently for the two language groups as indicated in Table 2 below. The internal consistency of the A-COPE subscales was found to be relatively low for both language groups. According to Foster and Parker (1999) the above-mentioned reliability scores are reasonably acceptable when considering that the scales are not cognitive in nature. In fact they are of the view that the reliability scores of cognitive tests are expected to be 0,8 or higher. However, with non-cognitive measures lower reliability scores are expected since these measures usually measure a broader construct.

**Table 2: Alpha coefficients for the various coping subscales per language group.**

Coping subscales	$\alpha$ -coefficients	
	English	Afrikaans
Relaxing	0,405	0,440
Seeking diversions	0,566	0,654
Engaging in demanding activity	0,560	0,631
Developing social support	0,668	0,632
Avoiding problems	0,579	0,636
Ventilating feelings	0,732	0,669
Developing self-reliance	0,562	0,581
Investing in close friends	0,489	0,489
Solving family problems	0,675	0,692
Seeking spiritual support	0,698	0,595
Seeking professional support	0,458	0,489
Being humorous	0,737	0,548

### *Biographical questionnaire*

A biographical questionnaire was used to obtain information regarding participants': age, gender, importance of religion, attendance of church activities and frequency of prayer. A discussion of the statistical analysis procedures follows.

### ***Research hypothesis***

There are significant differences in the mean scores of the coping strategies (ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being humorous, avoiding problems and relaxing) in relation to the following biographical and religious variables of adolescents, namely: age, gender, importance of religion, attendance of church activities and frequency of prayer.

### ***Statistical Procedures***

In order to investigate the stated research hypothesis, a multivariate analysis of variance (MANOVA) was done because more than one independent as well as dependent variable were being investigated (Howell, 2007). Should the MANOVA achieve a significant multivariate F-value, the analysis will be extended to include a one-way analysis of variance to determine for which of the dependent variables significant differences appear for the various independent variables. Since the independent variables had more than two categories, (except for the variable, sex), the Scheffé procedure was used to determine which of the groups' mean scores had statistically significant differences.

To comment on the meaningfulness of statistically significant results that were found by the study, the practical significance of the results will also be examined. As a criterion of practical significance, effect size will be calculated (Steyn, 1999). Where variance analyses apply, the following guidelines for effect size will be used:  $0,1$  = small,  $0,25$  = medium and  $0,4$  = large. Only statistically significant results with a medium or large effect size will be discussed. The 1% level of significance will be used in this study.

## **RESULTS AND THE DISCUSSION**

MANOVA analyses, with the aid of the SAS computer programme software (SAS Institute, 2003) was done to investigate whether there were significant differences in mean scores of the coping scale in terms of the five variables under investigation (indicated in Table 1). The results are indicated in Table 3.

**Table 3: MANOVA F-values to investigate the effect of age, gender and specific religious variables on coping.**

Independent variables	F-values+	N	<i>p</i>
Gender	27,17	12; 1053	0,0001
Age	6,10	24; 1805,4	0,0001
Importance of religion	16,18	36; 2485	0,0001
Attendance of activities	13,25	36; 2487,4	0,0001
Prayer	14,86	36; 2485	0,0001

\*  $p \leq 0,01$

+ Hotelling-Lawley test magnitude was used

In terms of the independent variables, *F*-values (according to the Hotelling-Lawley Trace) were obtained that were significant at the 1% level. In order to determine for which of the coping subscales, there were significant differences in mean scores of the independent variables, one- way analysis of variance together with Scheffé tests were conducted. These results are firstly indicated for gender as the independent variable, together with effect sizes (*f*) in Table 4.

**Table 4: Results of variance analyses with gender as independent variable.**

Dependent variable	Male		Female		<i>F</i>	<i>p</i>	<i>F</i>
	$\bar{X}$	<i>s</i>	$\bar{X}$	<i>s</i>			
Relaxing	13,59	3,12	13,85	2,82	1,79	0,1810	
Seeking diversions	23,60	5,47	23,03	5,07	3,62	0,0572	
Engaging in demanding activity	12,53	3,25	11,53	3,26	19,15*	0,0001	0,13
Developing social support	17,11	4,19	19,97	4,16	137,87*	0,0001	0,35
Avoiding problems	11,06	3,96	10,52	3,70	4,15	0,0418	
Ventilating feelings	15,64	4,45	16,15	4,44	3,94	0,0474	
Developing self-reliance	19,31	3,70	19,45	3,50	0,31	0,5779	
Investing in close friends	6,52	2,00	6,90	2,07	11,66*	0,0007	0,10
Solving family problems	16,48	4,56	16,54	4,56	0,55	0,4565	
Seeking spiritual support	7,18	2,84	7,51	2,74	7,91*	0,0050	0,08
Seeking professional support	3,21	1,61	3,03	1,46	0,91	0,3398	
Being humorous	6,59	2,00	6,34	2,10	4,60	0,0322	

\*  $p \leq 0,01$

From Table 4 it is clear that for both males and females significant differences (at 1% significance level) appear in the group means for four of the coping scales (engaging in demanding activity, developing social support, investing in close friends and seeking spiritual support). The corresponding *f*-values of these four coping subscales indicate that for the coping subscale, *developing social support*, a big effect size was obtained so that the results in this

instance, are of practical importance. The other three subscales for which statistically significant results were obtained, showed small effect sizes and therefore will not be discussed.

In terms of the coping subscale, *developing social support*, male adolescents had a significantly lower mean score in comparison to female adolescents. This finding is consistent with the findings of previous research. The general trend, indicated by research is that female adolescents use social support more often than male adolescents (Copeland & Hess, 1995; Ebata & Moos, 1994; Eschenbeck, et al., 2007; Frydenberg & Lewis, 1993; Hamid et al., 2003; Hampel & Petermann, 2005; Kavšek & Sieiffge-Krenke, 1996; Patterson & McCubbin, 1987; Piko, 2001; Seiffge-Krenke & Shulman, 1990). Girls tend to seek emotional and social support in trying to deal with physical and emotional changes that occur in late childhood or early adolescence (Hess & Richards, 1999). This finding suggests differential socialization for males and females. Young girls traditionally have been encouraged to vent their feelings and foster close relationships whilst boys traditionally have been encouraged to use less emotionally focussed coping strategies (Copeland & Hess, 1995; Patterson & McCubbin, 1987). Seeking social support helps girls to cope with and compensate for their feelings of powerlessness in a constructive way (Frydenberg & Lewis, 1991). This finding also supports Gilligan's (1982) finding that girls tend to perceive issues more from a relationship perspective in comparison to boys.

The results of one-way variance analyses with age as independent variable are indicated together with effect sizes in Table 5.

It seems that for the three age groups, as indicated in Table 5, differences in group mean scores, appear at the 1% level of significance in terms of seven coping subscales (relaxing, seeking diversions, engaging in demanding activity, avoiding problems, ventilating feelings, developing self-reliance and investing in close friends). With reference to these seven coping subscales, one subscale, *avoiding problems* indicates a small to medium effect size and is therefore of some practical importance. The other six coping subscales for which statistically significant results were obtained, indicate small effect sizes and will therefore not be discussed any further.

**Table 5: Results of variance analyses with age as independent variable**

Dependent variable	Age						F	P	F
	13-14 years		15-16 years		17 and older				
	$\bar{X}$	S	$\bar{X}$	s	$\bar{X}$	s			
Relaxing	13,32	3,11	13,63	2,94	14,33	2,78	10,61*	0,0001	0,14
Seeking diversions	24,12	5,33	23,35	5,20	22,42	5,20	6,41*	0,0017	0,11
Engaging in demanding activity	12,64	3,17	11,81	3,30	11,60	3,31	7,24*	0,0008	0,12
Developing social support	18,14	4,27	18,93	4,48	18,89	4,40	4,33	0,0134	
Avoiding problems	9,85	3,34	11,07	3,91	11,34	3,99	15,18*	0,0001	0,17
Ventilating feelings	15,37	4,74	15,85	4,26	16,67	4,31	7,16*	0,0008	0,11
Developing self-reliance	18,96	3,96	19,41	3,54	19,83	3,20	6,65*	0,0014	0,11
Investing in close friends	6,48	2,17	6,75	1,98	6,93	1,98	5,50*	0,0042	0,10
Solving family problems	16,78	4,80	16,43	4,41	16,35	4,54	0,30	0,7418	
Seeking spiritual support	7,36	2,65	7,41	2,94	7,26	2,76	0,05	0,9500	
Seeking professional support	3,26	1,59	3,04	1,50	3,08	1,53	1,52	0,2182	
Being humorous	6,48	2,11	6,36	2,09	6,55	1,98	0,88	0,4164	

\*  $p \leq 0,01$

With reference to the subscale, *avoiding problems*, Scheffé results indicate that the youngest age group (13-14 years) of adolescents' mean scores significantly differed from the mean scores of the other two age groups. The youngest age group had a significantly lower mean score for the *avoiding problems* subscale than the mean scores obtained for the other two age groups (15-16 years and 17 years and older). This subscale included the following items: the use of drugs not prescribed by a doctor, drinking alcohol, smoking, staying away from home as much as possible, and telling oneself the problem is not important.

This finding may relate to the type of stressors that are typically experienced by adolescents at different periods during this developmental phase. For instance, family-related stressors are reported more frequently during early adolescence (12-14 years old), whereas network and peer-group related stressors seem to occur particularly during mid-adolescence (15-16 years old). Achievement and school-related stressors are most commonly reported during late adolescence (17-19 years old) (Wagner & Compas, 1990). Thus, when considering stressor types in relation to different periods during adolescence, then one could expect and increase in the use of the avoiding problems coping subscale (in terms of substance use) as the adolescent engages more and more with his/her peer group and consequently is more frequently subjected to peer pressure including pressure to venture into substance use. This assertion is supported by developmental theories that

view family influences to be important in childhood and early adolescence but recede in relative importance as older adolescents spend more unsupervised time with peers (Furman & Buhrmester, 1992). Patterson and McCubbin (1987) relate substance use of adolescents to the major developmental task of differentiating from the family in pursuit of a personal identity and aligning with their peer group. Also, data from epidemiological surveys concerning the patterns of substance use during adolescence indicate that age trends suggest that substance use is a developmental phenomenon, which increases steadily and almost linearly from early to late adolescence (Young, Corley, Stallings, Rhee, Crowley & Hewitt, 2002).

This finding may also partially support the view that emotion-focused coping strategies increase in frequency through adolescence. Emotion-focused strategies manage or reduce distress by adopting measures such as problem avoidance through ignoring the issue, withdrawal, or expressing negative feelings (Compas et al., 1993).

The results of one-way analysis of variance with importance of religion as independent variable are indicated together with effect sizes in Table 6.

**Table 6: Results of variance analyses with importance of religion as independent variable**

Variable	Importance of religion								F	p	f
	Extremely important		Very important		Somewhat important		Little/Not at all important				
	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	S	$\bar{X}$	s			
Relaxing	13,67	3,09	13,63	2,89	14,07	2,81	13,92	2,98	1,14	0,3303	
Seeking diversions	23,56	5,51	23,00	5,16	23,66	4,94	22,98	5,24	0,76	0,5151	
Engaging in demanding activity	12,49	3,30	12,13	3,25	11,12	3,16	11,04	3,16	8,85	0,0001	0,16
Developing social support	19,14	4,59	18,46	4,16	18,72	4,26	17,57	4,53	3,99	0,0077	0,10
Avoiding problems	10,08	3,43	10,74	3,80	11,57	3,91	12,18	4,51	12,51	0,0001	0,20
Ventilating feelings	15,21	4,66	16,06	4,18	16,69	4,42	16,97	4,20	7,30	0,0001	0,14
Developing self-reliance	19,96	3,81	19,20	3,25	18,86	3,54	18,70	3,71	5,02	0,0018	0,12
Investing in close friends	6,71	2,09	6,77	1,96	6,67	2,08	6,66	2,14	0,13	0,9447	
Solving family problems	17,24	4,70	16,32	4,46	15,66	4,33	15,69	4,35	5,96	0,0005	0,13
Seeking spiritual support	8,76	2,61	7,51	2,38	5,55	1,82	4,20	1,83	144,99	0,0001	0,64
Seeking professional support	3,32	1,70	3,23	1,57	2,74	1,21	2,48	0,82	9,47	0,0001	0,16
Being humorous	6,37	2,07	6,42	1,92	6,58	2,15	6,70	2,30	1,12	0,3406	

\* p <= 0,01

From Table 6 it is clear that for the four importance of religion groups, differences in group mean scores appear at the 1% significance level in terms of eight coping subscales

(engaging in demanding activity, developing social support, avoiding problems, ventilating feelings, developing self-reliance, solving family problems, seeking spiritual support and seeking professional support). With reference to these eight coping subscales, the corresponding *f*-values indicate that for only two subscales, namely *avoiding problems*, a small to medium and for *seeking spiritual support*, a large effect size was found; and therefore were respectively of medium to large practical importance. The other six coping subscales, for which statistically significant results were obtained, indicate small effect sizes and will therefore not be discussed any further.

With reference to the *avoiding problems* subscale, Scheffé results indicate that the mean score of the extremely important group ( $\bar{X} = 10,08$ ) differs from the mean scores of the somewhat ( $\bar{X} = 11,57$ ) as well as the little/not at all ( $\bar{X} = 12,18$ ) groups. Also, in terms of this subscale, the very important group's mean score ( $\bar{X} = 10,74$ ) also differs significantly from the mean scores of the somewhat as well as little/not at all groups. The extremely important group and the very important groups' mean scores do not differ significantly, whilst the somewhat and little/not at all groups' *avoiding problems* mean scores also do not differ significantly. It is clear that for groups for which religion is of lesser importance, (somewhat or little) a significantly higher mean score was obtained for *avoiding problems* when compared to the groups for which religion was important (extremely or very). When considering the items that comprise the *avoiding problems* coping subscale (mentioned above), this finding supports the findings of previous research that indicate an inverse relationship between the importance of religion and substance use (e.g., Heath et al., 1999; Wills et al., 2003). Furthermore, the claim of Regnerus & Burdette (2006) that the extent to which religion is important in the life of the adolescent is uniquely and consistently related to better family relations may also partially explain this finding, especially, in terms of the *avoiding problems* subscale with specific reference to the item, *staying away from home*. It is not unusual to expect adolescents to engage lesser with their families when family relations are unsatisfactory.

In terms of the variable *seeking spiritual support*, significant differences in the mean scores of all four importance of religion groups were obtained, as indicated by Scheffé results. It is clear from Table 6 that individuals who consider their religion as extremely important obtained the highest mean score ( $\bar{X} = 8,76$ ) whilst those individuals that perceived religion to be of little or of no importance obtained the lowest mean score ( $\bar{X} = 4,20$ ) for seeking spiritual support. This finding is expected. The more importance an individual attributes to his/her religion, the more likely he/she would consider using the coping subscale *seeking spiritual support* in response to a stressor(s). The items comprising this coping subscale focus on

religious behaviours (praying, going to church, talking to clergy) (Patterson & McCubbin, 1987). This result is supported by previous studies. Religious individuals often employ religious activities as their main coping activities (Pargament, Ensing, Falgout, Olsen, Reilly, Van Haitsma et al., 1990; Szewczyk & Weinmuller, 2006). Pargament (1997) further illustrates this point by citing previous studies that support this position and also hypothesizes that the coping process is influenced by an individual's orienting system. People generally cope with the tools that are available to them. Religion (e.g., religious beliefs, practices, feelings and relationships) constitutes part of this orientating system and is more likely to be accessed in coping when it forms a larger part of the individual's orienting system for relating to the world.

The results of one-way analysis of variance with attendance of church activities as independent variable is indicated together with effect sizes (*f*) in table 7.

**Table 7: Means, standard deviations and *F*-values of the one-way analysis of variance to test for differences in terms of adolescents' attendance of church activities.**

Variable	Attendance: church activities								<i>F</i>	<i>p</i>	<i>f</i>
	Once a week		Once a month		Every 3 to 6 months		Never				
	$\bar{X}$	<i>s</i>	$\bar{X}$	<i>S</i>	$\bar{X}$	<i>S</i>	$\bar{X}$	<i>s</i>			
Relaxing	13,69	2,97	13,69	2,85	14,01	2,85	13,74	3,17	0,35	0,7883	
Seeking diversions	23,47	5,22	23,13	5,43	23,06	5,40	22,85	5,22	0,43	0,7295	
Engaging in demanding activity	12,30	3,21	11,68	3,37	11,48	3,50	11,26	3,08	4,72*	0,0028	0,12
Developing social support	18,80	4,45	18,53	4,20	18,85	4,16	17,64	4,70	2,24	0,0821	
Avoiding problems	10,45	3,69	10,77	3,64	11,34	3,96	11,89	4,40	5,59*	0,0008	0,13
Ventilating feelings	15,47	4,54	16,03	4,04	17,41	4,06	16,20	4,51	10,24*	0,0001	0,17
Developing self-reliance	19,51	3,66	19,32	3,49	19,19	3,38	18,97	3,64	0,60	0,6180	
Investing in close friends	6,73	2,00	6,82	2,13	6,72	1,98	6,60	2,30	0,20	0,8991	
Solving family problems	16,62	4,58	16,66	4,68	16,44	4,67	15,62	3,95	1,24	0,2929	
Seeking spiritual support	8,34	2,61	6,98	2,42	5,67	1,82	4,16	1,76	122,65*	0,0001	0,59
Seeking professional support	3,23	1,58	2,90	1,45	3,02	1,51	2,74	1,32	2,54	0,0554	
Being humorous	6,41	1,99	6,52	2,03	6,50	2,16	6,58	2,37	0,52	0,6652	

\*  $p \leq 0,01$

From Table 7 it is clear that for the four attendance of church groups significant differences in group mean scores appear at the 1% level in terms of four of the coping subscales (engaging in demanding activity, avoiding problems, ventilating feelings and seeking spiritual support). The corresponding *f*-values indicate that only for one coping subscale, *seeking spiritual support*, a large effect size was found and therefore this result is of practical importance. The other three coping subscales for which statistically significant results were obtained, indicate small effect sizes and will therefore not be further discussed.

With reference to the *spiritual support* subscale, the Scheffé results indicate that all four groups' (once a week, once a month, every 3 to 6 months and never) mean scores differ significantly from one another. From Table 7 it is clear that the once a week group obtained the highest mean score ( $\bar{X} = 8,34$ ), whilst the never group obtained the lowest mean score ( $\bar{X} = 4,16$ ) with regards to seeking spiritual support. This finding is consistent with the previous result which found a positive correlation between *importance of religion* and the use of the same coping subscale, *seeking spiritual support*. Thus, once more, this result is expected and can be similarly explained because importance of religion and church attendance are two dimensions of religion/ religiosity. These dimensions of religion/religiosity are accurately reflected by the items of the seeking spiritual support subscale. Therefore the positive association of the frequency of church attendance with the use of the coping subscale, seeking spiritual support is plausible and supported by previous studies (Pargament et al., 1990; Szewczyk & Weinmuller, 2006) and by Pargament's (1997) theory that the availability of religion in the coping process is influenced by the extent to which it is part of the individual's orienting system.

The results of one-way analysis of variance with frequency of prayer as the independent variable are indicated together with effect sizes (*f*) in Table 8.

From Table 8 it is clear that for the four frequency of prayer groups differences in group mean scores appear at the 1% level of significance in terms of seven of the coping subscales (engaging in demanding activity, developing social support, avoiding problems, ventilating feelings, solving family problems, seeking spiritual support en seeking professional support). The corresponding *f*-values indicate that only for two of the coping subscales, namely *avoiding problems*, a small to medium and for *seeking spiritual support*, a large effect size was found and are therefore respectively of moderate to large practical importance. The other five coping subscales for which statistically significant results were obtained, indicate small effect sizes and will therefore not be further discussed.

**Table 8: Means, standard deviations and *F*-values of the one-way analysis of variance to test for differences in frequency of prayer for adolescents**

Variable	Frequency of prayer								<i>F</i>	<i>p</i>	<i>f</i>
	Once or twice a day		Regularly		Sometimes		Seldom/Never				
	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	S	$\bar{X}$	S			
Relaxing	13,63	3,07	13,87	2,85	13,61	2,97	14,01	2,91	0,62	0,6008	
Seeking diversions	23,24	5,32	23,76	5,31	23,21	5,32	22,74	4,99	1,45	0,2254	
Engaging in demanding activity	12,35	3,36	12,21	3,26	11,82	3,16	10,99	3,20	6,55*	0,0002	0,14
Developing social support	19,00	4,65	19,02	4,05	18,30	4,33	17,85	4,46	3,93*	0,0084	0,11
Avoiding problems	10,15	3,67	10,47	3,82	11,09	3,65	12,25	4,08	13,64*	0,0001	0,20
Ventilating feelings	15,62	4,61	15,76	4,50	15,79	4,26	17,17	4,15	5,37*	0,0011	0,12
Developing self-reliance	19,83	3,58	19,40	3,51	19,18	3,64	18,66	3,58	3,77	0,0104	
Investing in close friends	6,58	2,05	6,87	1,98	6,80	1,98	6,63	2,23	1,52	0,2072	
Solving family problems	16,95	4,76	16,94	4,47	16,12	4,45	15,27	4,16	7,38*	0,0001	0,14
Seeking spiritual support	8,53	2,70	8,07	2,49	6,71	2,11	4,22	1,74	138,88*	0,0001	0,62
Seeking professional support	3,05	1,52	3,27	1,63	3,32	1,64	2,58	0,95	8,20*	0,0001	0,15
Being humorous	6,37	2,13	6,50	1,96	6,47	1,96	6,53	2,26	0,15	0,9293	

\*  $p \leq 0,01$

With reference to the *avoiding problems* subscale, Scheffé results indicate that the once a day group ( $\bar{X} = 10,15$ ) differs from the sometimes group's ( $\bar{X} = 11,09$ ) as well as the seldom/never group's ( $\bar{X} = 12,25$ ) mean scores. Furthermore, the regularly group's ( $\bar{X} = 10,47$ ) mean score for *avoiding problems* differs from the sometimes group's mean score whilst the sometimes group's mean score also differs significantly from the seldom/never group's mean score. This result suggests that adolescents who reported a higher frequency of prayer used the coping subscale, *avoiding problems* lesser than those who reported lower frequencies of prayer. Once more, as in the case of the above result, involving the relationship between the religiosity

dimension (importance of religion) and the *avoiding problems* subscale, this result is expected given its items, and considering that prayer is another dimension of religiosity. Nonnemaker et al. (2003) found that generally both public (measured by frequency of attendance at religious services and frequency of participation in religious youth group) and private (measured by frequency of prayer and importance of religion) religiosity was protective against cigarettes, alcohol, and marijuana use. Also, as mentioned earlier, a study conducted by Francis and Evans (1996) found indications of a positive relationship between frequency of personal prayer and perceived purpose in life amongst adolescents, regardless of whether they attended church or not. An argument could thus be posited that it is not implausible to expect adolescents with a stronger purpose in life (partially possibly due to a higher frequency of prayer) to make lesser use of the coping subscale, *avoiding problems*.

With reference to *seeking spiritual support*, the Scheffé-results indicate that all four of the frequency of prayer groups' (once a day, regularly, sometimes, seldom/never) mean scores differ significantly from one another. Table 8 clearly indicates that the once a day group obtained the highest mean ( $\bar{X} = 8,53$ ) and the seldom/never group the lowest mean score ( $\bar{X} = 4,22$ ) score with regard to *seeking spiritual support*. The results suggest that adolescents who pray more also tend to use the coping subscale *seeking spiritual support* more frequently than those who make lesser use of prayer. This result is expected given the items of the subscale *seeking spiritual support*. The result is also consistent with the other results in this study involving the other dimensions of religiosity, namely importance of prayer and church attendance in relation to the coping subscale, *seeking spiritual support*. Once more this result is consistent with Pargament's (1997) availability of religion in orienting systems theory and by the findings of previous studies (Pargament, 1990; Szewczyk & Weinmuller, 2006). Therefore the positive association of the frequency of prayer with the use of the coping subscale, *seeking spiritual support* is plausible.

## Summary

This study investigated whether there were statistically meaningful associations (using effect sizes) between the coping strategies used by adolescents and the variables of age, gender, importance of religion/ spirituality, attendance of church activities and frequency of prayer.

In terms of the *gender* variable a big effect size was obtained for the *developing social support* coping subscale, suggesting practical importance. Male adolescents had a significantly lower mean score in comparison to female adolescents. This finding is consistent with the findings of previous research (Copeland & Hess, 1995; Ebata & Moos, 1994; Eschenbeck et al., 2007; Frydenberg & Lewis, 1993; Hamid et al., 2003; Hampel & Petermann, 2005; Kavšek &

Seiffge-Krenke, 1996; Patterson & McCubbin, 1987; Piko, 2001; Seiffge-Krenke & Shulman, 1990).

In terms of the *age* variable, the *avoiding problems* coping subscale was found to have a small to medium effect size and is therefore of some practical importance. The youngest age group had a significantly lower mean score for the *avoiding problems* subscale than the mean scores obtained for the two older age groups (15-16 years, and 17 years and older). Different explanations can be suggested for this finding. For instance, family-related stressors are reported more frequently during the early adolescent period, network and peer-group related stressors seem to occur particularly during the period of mid-adolescence, and achievement and school-related stressors are most commonly reported during late adolescence (Wagner & Compas, 1990). Another explanation could be the patterns of substance use during adolescence. Studies indicate that substance use is a developmental phenomenon, which increases steadily from early to late adolescence (Young et al., 2002). This finding may also reflect the view that emotion-focused coping strategies increase in frequency through adolescence (Compas et al., 1993).

In terms of the *importance of religion/spirituality* variable, a meaningful (practical) association was found for the coping subscale, *avoiding problems*. Groups for which religion/spirituality is of lesser importance, (somewhat or little) obtained a significantly higher mean score for the *avoiding problems* subscale in comparison to the groups for which religion was important (extremely or very). This result supports previous research which suggests a negative correlation between religion/spirituality and avoidance coping behaviours such as substance use (e.g., Heath et al. 1999; Wills et al., 2003) and unsatisfactory family relations (e.g. Regnerus & Burdette, 2006).

The *importance of religion/spirituality*, *frequency of church attendance*, as well as the *frequency of prayer* variables were found to have meaningful positive associations with the coping variable, *seeking spiritual support*. Given that importance of religion/spirituality, frequency of church attendance and frequency of prayer are considered to be different dimensions of religion/spirituality, it is expected that they would have a positive association with the use of spiritual support in coping. These findings are supported by previous studies (Pargament et al., 1990; Szewczyk & Weinmuller, 2006) and Pargament's (1997) view that the availability of religion in the coping process depends on the extent to which it is part of the individual's orienting system.

### **Limitations and recommendations**

A possible limitation to the study is the difficulty in determining whether self-reported coping strategies correspond to actual coping behaviour, and whether participants consciously or

unconsciously distort the information when reporting (Feldman et al., 1995; Griffith, Dubow & Ippolito, 2000). Research into coping and adjustment can be improved by using multiple sources of reporting (e.g., child, parent and teacher reports) as well as longitudinal studies. It is also useful to include stressor-specific and global indices of adjustment in relation to coping strategies (Griffith et al., 2000).

This study used a sample of urban adolescents which may be another limitation. There could be a difference in religiousness/spirituality between urban and rural adolescents. Helve (cited in Winter, Karvonen & Rose, 2002) found a difference in religiousness between a group of urban youth compared to a group of rural youth. The urban youth attended church less frequently, prayed less frequently and expressed less belief in God compared to the rural youth. Therefore this study's findings may not be generalized to the broader South African adolescent population.

## REFERENCES

- Ball, J., Armistead, L., & Austin, B. (2003). The relationship between religiosity and adjustment among African-American, female, urban adolescents. *Journal of Adolescence* 26, 431–446.
- Benson, P.L., Roehlkepartain, E.C., & Rude, S.P. (2003). Spiritual development in childhood and adolescence: Toward a field of inquiry. *Applied Developmental Science*, 7(3), 205-213.
- Byrne, B. (2000). Relationship between anxiety, fear, self-esteem, and coping strategies in adolescence. *Adolescence*, 35(137), 201-215.
- Causey, D.L., & Dubow, E.F., (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology*, 21(1), 47–59.
- Chapman, P., & Mullis, R. L. (1999). Adolescent coping strategies and self-esteem. *Child Study Journal*, 29, 69–77.
- Compas, B.E., Connor-Smith, J.K., Saltzman, H., Thomsen, A., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, 127, 87–127.
- Compas, B.E., Malcarne, V.L., & Fondacaro, K.M. (1988). Coping with stressful events in older children and young adolescents. *Journal of Consulting and Clinical Psychology*, 56, 405–411.
- Compas, B.E., Orosan, P.G., & Grant, K.W. (1993). Adolescent stress and coping: implications for psychopathology during adolescence. *Journal of Adolescence*, 16, 331-349.
- Copeland, E.P., & Hess, R.S. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *Journal of Early Adolescence*, 15(2), 203-219.

- Davis, T.L., Kerr, B.A., & Robinson Kurpius, S.E. (2003). Meaning, purpose, and religiosity in at-risk youth: The relationship between anxiety and spirituality. *Journal of Psychology and Theology*, 31(4), 356-365.
- Demir, M., & Urberg, K.A. (2004). Church attendance and well-being among adolescents. *Journal of Beliefs & Values*, 25(1), 63-68.
- Ebata, A.T., & Moos, R.H. (1994). Personal, situational, and contextual correlates of coping in adolescence. *Journal of Research on Adolescence* 4(1), 99-125.
- Erikson, E. (1968). *Identity: Youth and crisis*. London: Faber and Faber.
- Eschenbeck, H., Kohlmann, C, & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences*, 28(1), 18–26.
- Fehring, R.J., Cheever, K.H., German, K. & Philpot, C. (1998). Religiosity and sexual activity among older adolescents. *Journal of Religion and Health*, 37(3), 229-247.
- Feldman, S.S., Fisher, L., Ransom, D.C., & Dimiceli, S. (1995). Is “What is good for the goose good for the gander?” Sex differences in relations between adolescent coping and adult adaptation. *Journal of Research on Adolescence* 5(3), 333-359.
- Fields, L., & Prinz, R.J. (1997). Coping and adjustment during childhood and adolescence. *Clinical Psychology Review*, 17(8), 937-976.
- Fischer, J., & Corcoran, K. (Eds.) (1994). *Measures for clinical practice* (2<sup>nd</sup> ed.). New York: Free Press.
- Foster, J.J. & Parker, I. (1999). *Carrying out investigations in psychology: Methods and statistics*. Leicester: BPS Books.
- Francis, L.J., & Evans, T.E. (1996). The relationship between personal prayer and purpose in life among churchgoing and non-churchgoing twelve-to-fifteen-year olds in the UK. *Religious Education*, 91(1), 9-21.

- Frydenberg, E., & Lewis, R. (1991). Adolescent coping: the different ways in which boys and girls cope. *Journal of Adolescence* 14, 119-133.
- Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others: Age, gender, and ethnicity as determinants of coping. *Journal of Adolescence*, 16, 253–266.
- Furman W, Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development*, 63, 103–115.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Good, M., & Willoughby, T. (2006). The role of spirituality versus religiosity in adolescent psychosocial adjustment. *Journal of Youth and Adolescence*, 35(1), 41–55.
- Griffith, M.A., Dubow, E.F., & Ippolito, M.F. (2000). Developmental and cross-situational differences in adolescents' coping strategies. *Journal of Youth and Adolescence*, 29(2), 183-204.
- Hamid, P.N., Yue, X.D., Leung, C.M. (2003). Adolescent coping in different Chinese family environments. *Adolescence*, 38(149), 111-130.
- Hampel, P., & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence*, 34, 73–83.
- Heath, A.C., Madden, P.A.F., Grant, J.D., McLaughlin, T.L., Todorov, A.A. & Bucholz, K.K. (1999). Resiliency factors protecting against teenage alcohol use and smoking: influences of religion, religious involvement and values, and ethnicity in the Missouri Adolescent Female Twin Study. *Twin Research*, 2, 145–155.
- Herman-Stahl, M.A., Stemmler, M., & Petersen, A.C. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence*, 24, 649–665.

- Hess, R.S., & Richards, M.L. (1999). Developmental and gender influences on coping: Implications for skills training. *Psychology in the Schools*, 36(2), 149-157.
- Hodges, S. (2002). Mental health, depression, and dimensions of spirituality and religion. *Journal of Adult Development*, 9(2), 109-115.
- Hoffman, M. A., Levy-Schiff, R., Sohlberg, S. C., and Zarizki, J. (1992). The impact of stress and coping: Developmental changes in the transition to adolescence. *Journal of Youth and Adolescence*, 27, 451– 469.
- Holder, D.W, Durant, R.H, Harris, T.L., Daniel, J.H., Obeidallah, D. & Goodman, E. (2000). The association between adolescent spirituality and voluntary sexual activity. *Journal of Adolescent Health*, 26(4), 295–302.
- Howell, D.C. (2007). *Statistical methods for psychology* (6<sup>th</sup> ed.). Belmont: Thomson.
- Kausara, R., & Munir, R. (2004). Pakistani adolescents' coping with stress: Effect of loss of a parent and gender of adolescents. *Journal of Adolescence*, 27, 599–610.
- Kavšek, M.J., & Sieiffge-Krenke, I. (1996). The differentiation of coping traits in adolescence. *International Journal of Behavioral Development*, 19(3), 651-668.
- Larson, R., & Ham, M. (1993). Stress and “storm and stress” in early adolescence: The relationship of negative events with dysphoric affect. *Developmental Psychology*, 29(1), 130-140.
- Lazarus, R. S., and Folkman, S. (1984). *Stress, appraisal and coping*. Springer: New York.
- Loury, L. L. (2004). Does church attendance really increase schooling? *Journal for the Scientific Study of Religion* 43(1), 119–127.
- Maharajh, H. D., Ali, A., Konings, M. (2006). Adolescent depression in Trinidad and Tobago. *European Child & Adolescent Psychiatry*, 5(1), 30-37.

- McMahon, S.D., Singh, J.A., Lakeasha, M.A., Garner, S., & Benhorin, S. (2004). Taking advantage of opportunities: Community involvement, well-being, and urban youth. *Journal of Adolescent Health, 34*, 262–265.
- Milevsky, A., & Levitt, M.J. (2004). Intrinsic and extrinsic religiosity in preadolescence and adolescence: Effect on psychological adjustment. *Mental Health, Religion & Culture, 7*(4), 307–321.
- Nonnemaker, J.M., McNeely, C. A., & Blum, R.W. (2003). Public and private domains of religiosity and adolescent health risk behaviors: Evidence from the National Longitudinal Study of Adolescent Health. *Social Science & Medicine, 57*, 2049–2054.
- Oxley, W.M. (1996). *Coping and self-concept in adolescent girls*. Unpublished Masters Thesis. University of Stellenbosch.
- Pargament, K.I. (1997). *The Psychology of religion and coping: theory, research, practice*. New York: Guilford Press.
- Pargament, K.I., Ensing, D.S., Falgout, K., Olsen, H., Reilly, B., Van Haitsma, K., & Warren, R. (1990). God help me: (I): Religious coping efforts as predictors of the outcomes to significant negative life events. *American Journal of Community Psychology, 18*, 793-824.
- Patterson, J.M. & McCubbin, H.I (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence, 10*, 163-186.
- Pearce, M.J., Little, T.D., & Perez, J.E. (2003). Religiousness and depressive symptoms among adolescents. *Journal of Clinical Child and Adolescent Psychology, 32*(2), 267-276.
- Piko, B. (2001). Gender differences and similarities in adolescents' ways of coping. *The Psychological Record, 51*, 223-235.
- Reddy SP, Panday S, Swart D, Jinabhai CC, Amosun SL, James S, et al., (2003). *Umthenthe Uhlaba Usamila – The South African Youth Risk Behaviour Survey 2002*. Retrieved on

September 25, 2008 from the World Wide Web:

<http://www.mrc.ac.za/healthpromotion/reports.htm>

- Regnerus, M.D., (2002). Shaping schooling success: religious socialization and educational outcomes in metropolitan public schools. *Journal for the Scientific Study of Religion* 39, 363–370.
- Regnerus, M.D. (2003). Religion and positive adolescent outcomes: a review of research and theory. *Review of Religious Research*, 44(4), 394-413.
- Regnerus, M.D., & Burdette, A. (2006). [Religious change and adolescent family dynamics](#). *Sociological Quarterly*, 47(1), 175-194.
- Richaud de Minzi, M.C. (2003). Coping assessment in adolescents. *Adolescence*, 38(150), 321-330.
- Roecker, C.E., Dubow, E.F., & Donaldson, D. (1996). Cross-situational patterns in children's coping with observed interpersonal conflict. *Journal of Clinical Child Psychology*, 25, 288–299.
- Rostosky, S.S., Wilcox, B.L., Wright, M.L.C., & Randall, B.A. (2004). The impact of religiosity on adolescent sexual behavior: A review of the evidence. *Journal of Adolescent Research*, 19(6), 677-697.
- SAS Institute (2003). *SAS user's guide: Statistics version 8.2 edition*. Cary: Author.
- Schaefer, C.A., & Gorsuch, R.L. (1993). Situational and personal variations in coping. *Journal for the Scientific Study of Religion*, 32(2), 136-147.
- Schludermann, E., Schludermann, S. & Huynh, C. (1997). *Catholic Schools Study Report: Religiosity, Values and Adjustment*, 1-46.
- Seiffge-Krenke, I. (1993). Coping behaviour in normal and clinical samples: More similarities than differences? *Journal of Adolescence*, 16, 285-303.

- Seiffge-Krenke, I. (2006). Coping with relationship stressors: The impact of different working models of attachment and links to adaptation. *Journal of Youth and Adolescence*, 35(1), 25–39.
- Seiffge-Krenke, I., & Shulman, S. (1990). Coping style in adolescents. A cross-cultural study. *Journal of Cross-Cultural Psychology*, 21, 351–377.
- Siegrist, M. (1996). Church attendance, denomination and suicide ideology. *The Journal of Social Psychology*, 136(5), 559-566.
- Singleton, A., Mason, M., & Webber, R. (2004). Spirituality in adolescence and young adulthood: a method for a qualitative study. *International Journal of Children's Spirituality*, 9(3), 247-262.
- Sinha, J.W., Cnaan, R.A., & Gelles, R.J. (2007). Adolescent risk behaviors and religion: Findings from a national study. *Journal of Adolescence* 30, 231–249.
- Skinner, E.A., & Zimmer-Gembeck, M.J. (2007). The development of coping. *Annual Review of Psychology*, 58, 119-144.
- Smith, C. (2003). Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion* 42(1), 17-30.
- SPSS Incorporated (2003). *SPSS user's guide: Version 12.0*. New York: Author.
- Stern, M., & Zevon, M. (1990). Stress, coping, and family environment: The adolescent's response to naturally occurring stressors. *Journal of Adolescent Research*, 5(3), 290-305.
- Steyn, H.S. (1999). *Praktiese beduidendheid: die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheer Komitee, PU vir CHO.
- Szewczyk, L.S., & Weinmuller, E. B., (2006). Religious aspects of coping with stress among adolescents from families with alcohol problems. *Mental Health, Religion & Culture*, 9(4): 389–400.

- Wagner, B., & Compas, B. (1990). Gender, instrumentality and expressivity: Moderators of the relation between stress and psychological symptoms during adolescence. *American Journal of Community Psychology, 18*, 383-406.
- Walker, C. Ainette, M.G., Wills, T.A., & Mendoza, D. (2007). Religiosity and substance use: Test of an indirect-effect model in early and middle adolescence. *Psychology of Addictive Behaviors, 21*(1), 84–96.
- Wallace, J.M., Forman, T.A., Caldwell, C.H., & Willis, D.S. (2003). Religion and U.S. secondary school students: Current patterns, recent trends, and sociodemographic correlates. *Youth & Society, 35*(1), 98-125.
- Williams, K., & McGillicuddy-De Lisi, A. (2000). Coping strategies in adolescents. *Journal of Applied Developmental Psychology, 20*(4), 537–549.
- Wills, T.A., Yaeger, A.M., Sandy, J.M. (2003). Effect of religiosity for adolescent substance use. *Psychology of Addictive Behaviors, 17*(1), 24–31.
- Wilson, G.S., Pritchard, M.E., & Revalee, B. (2005). Individual differences in adolescent health symptoms: The effects of gender and coping. *Journal of Adolescence, 28*, 369–379.
- Winter, T., Karvonen, S., & Rose, R.J. (2002). Does religiousness explain regional differences in alcohol use in Finland? *Alcohol and Alcoholism, 37*(4), 330-339.
- Young, S.E., Corley, R.P., Stallings, M.C., Rhee, S.H., Crowley, T.J., Hewitt, J.K. (2002). Substance use, abuse and dependence in adolescence: Prevalence, symptom profiles and correlates. *Drug and Alcohol Dependence 68*, 309-322.
- Zinnbauer, B. J., Pargament, K. I., Cole, B.; Rye, M. S., Butter, E. M. Belavich, T. G., Hipp, K. M., Scott, A.B., & Kadar, J.L.. (1997). Religion and spirituality: Unfuzzifying the fuzzy. *Journal for the Scientific Study of Religion, 36*(4), 549-564.

### **ARTICLE III: *The relationship between coping and spiritual well-being in a group of South African adolescents***

*This study investigated whether there were statistically meaningful associations (using Scheffé tests to determine effect sizes) between coping and spiritual well-being in a group of South African adolescents. The sample consisted of 1283 adolescent learners drawn from high schools in the metropole of Cape Town, South Africa. The ACOPE (Patterson & McCubbin, 1987) instrument was used to measure coping in terms of 12 coping strategies. Spiritual well-being was measured by the SWBQ (Gomez & Fisher, 2003) instrument, which gives a global score as well as a score for each of four spiritual well-being domains (personal, communal, environmental and transcendental). The results indicated a significant positive association, with large effect size, suggesting practical importance between the coping subscale “seeking spiritual support” and the transcendental spiritual well-being domain. In addition, a significant positive association with medium effect size, suggesting moderate practical importance, was found for the coping subscale “developing social support” and the communal spiritual well-being domain.*

South Africa is a country characterised by diversity in culture, beliefs and languages. It is a complex society, facing many challenges such as inequality in the standards of living amongst its citizens and a lack of emotional security due to social and cultural transition. Consequently, the lives of South African adolescents are influenced by social, cultural, political and economic factors, which play a role in stress, depression, feelings of hopelessness and helplessness (Meehan, Peirson & Fridjhon, 2007). It is therefore important to investigate how South African adolescents cope with daily stressors. Equally important is the investigation of adolescents’ well-being particularly their spiritual well-being, given the potential that religion and spirituality have in promoting positive well-being in youth (Crawford, O’Dougherty Wright & Masten, 2006). In addition, spirituality/religion appears to be an important factor in the lives of South African youth (Lippman & Keith, 2006), yet there seems to be a paucity of research related to religion and spirituality of South African adolescents. In light of the above, the purpose of this study is to examine the relationship between coping and spiritual well-being of adolescents in the South African context. Before discussing these two concepts, the important related constructs of spirituality and religion will be touched upon for the purpose of contextualising their meanings in terms of the writer’s stance.

#### **Conceptualising spirituality and religion**

Various scholars have offered diverse definitions of spirituality, especially in relation to religion with little consensus been reached (Zinnbauer et al., 1997). Some scholars consider

spirituality and religion to be interrelated (Benson, Roehlkepartain & Rude, 2003; Davis, Kerr & Robinson Kurpius, 2003). To others such as Pargament (1997) spirituality is a multidimensional construct including both institutional religious expressions, such as dogma and ritual, and personal religious expressions, such as feelings of spirituality, beliefs about the sacred, and religious practices. In contrast to Pargament, other scholars such as Kaye and Raghavan (2002) consider spirituality to be a broader term, an umbrella concept under which religion is found. To them, religiosity refers to an external, formal system of beliefs, values, rules of conduct, and rituals and is an expression of one's spiritual perspective. It might therefore be judicious to consider the position of Singleton, Mason and Webber (2004) in offering a stipulative, rather than a definitive definition of spirituality for the purposes of their study.

Elkins, Hedstrom, Hughes, Leaf and Saunders (1988) view spirituality as “*a way of being and experiencing that comes about through awareness of a transcendent dimension and that is characterized by certain identifiable values in regard to self, others, nature, life, and whatever one considers to be the Ultimate.*” (p.10). This definition seems to be an apt reflection of spiritual well-being as defined by Fisher (cited in Fisher, Francis & Johnson, 2000).

Thus, for the purposes of this study, in line with the views expressed by Singleton et al. (2004), the writer adopts the position that spirituality is broader than (Kaye & Raghavan, 2002), yet interrelated with religion (e.g., Benson et al., 2003) and that similar to the definition of Elkins et al. (1988), spirituality is expressed by Fisher's (cited in Fisher et al., 2000) four domains of spiritual well-being. In addition, in this article the terms spirituality and religion will be used interchangeably.

### **Coping during adolescence**

Coping with stress should be different at the different stages of life. Adolescents face several challenges such as forming bonds with peers, differentiating themselves from family and moving towards an adult identity (Richaud de Minzi, 2003). Compas, Connor-Smith, Saltzman, Thomsen and Wadsworth (2001) are of the view that psychosocial stress is a significant and pervasive risk factor for psychopathology in childhood and adolescence. The ways that children and adolescents cope with stress are potentially important mediators and moderators of the impact that stress has on current and future adjustment and psychopathology. The development of characteristic ways of coping in childhood may place individuals on more versus less adaptive developmental pathways and may be the precursor of coping throughout adulthood. Coping represents an important aspect of the more general processes of self-regulation, emotion, cognition, behaviour physiology and the environment (Compas et al., 2001).

Scholars have offered various definitions of coping over time. The most widely cited definition of coping is that of Lazarus & Folkman (1984). They define coping as “*constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person*” (p. 141). Furthermore, they conceptualized coping behaviour in terms of problem-focussed and emotion-focussed strategies.<sup>1</sup>

The concept of appraisal is one of the basic tenets of Lazarus’ theory. Cognitive appraisal is what an individual does to evaluate whether a particular encounter is relevant to his/her well-being or not. In each encounter two forms of appraisal occur: primary and secondary appraisal. The appraisal may initiate a chain of activity and coping actions to manage the situation. Problem focussed strategies are used if the encounter is amenable to change. When the situation is evaluated as unchangeable, emotion-focused strategies are more likely to be used.

Frydenberg (1997) identified three important aspects of Lazarus’ definition of coping. Firstly, coping is context bound rather than being primarily influenced by stable personality characteristics. Secondly, coping strategies are any purposeful act that an individual does in his/her transaction with the environment. Coping is therefore an attempt to deal with the problem and not necessarily a successfully completed act. The attempt may consist of behavioural acts or cognitions. Thirdly, coping is a process that changes over time during a particular encounter. There is an initial appraisal of the situation prior to initiating a coping action. The consequences of the coping efforts lead to a reappraisal of the situation and determine the call on coping resources.

Coping dimensions are further categorised in terms of specific subtypes of coping such as ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being humorous, avoiding problems and relaxing. During research, specific items (Compas et al., 2001; Patterson & McCubbin, 1987) usually represent these coping subtypes. A coping subtype or category that may have particular relevance to spirituality and spiritual well-being is spiritual/religious coping. It is a multidimensional construct that includes a range of negative and positive coping strategies. Pargament (1997) defined religious coping as the search for significance in times of stress related to the sacred. The term *sacred* refers to concepts of God, the divine, and transcendent

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<sup>1</sup> There are other conceptualizations of coping which may be viewed in relevant literature such as Compas et al. (2001).

reality as well as any aspect of life that takes on an extra ordinary character because of its association with or representation of divinity (Pargament & Mahoney, 2005). It highlights the unique character of spirituality/religion. Unlike other institutions, religion connects the search (intentional processes) for significance (outcomes sought) during times of stress with higher powers and beliefs, experiences and institutions associated with supernatural forces (Mahoney, Pendleton & Ihrke, 2006). Religious coping has been found to mediate the relationship between a variety of stressors and psychological as well as physical health (Schaefer & Gorsuch, 1993). Religion may provide adolescents with effective behavioural and cognitive resources in dealing with their mental, emotional, and interpersonal stresses and problems. These resources may include practices such as prayer, meditation, confession, forgiveness, reconciliation small-group sharing, cleaning rituals and funeral rites (Smith, 2003).

### **Factors influencing adolescent coping**

Adolescent coping styles and strategies are influenced by various factors such as age, gender, intellect, family resources and support from parents and others (Frydenberg & Lewis, 1991). Temperament (Ebata & Moos, 1994) and the attachment relationship between the child and his/her primary caregiver may also influence the child's competence in dealing with stressful situations (Seiffge-Krenke, 2006). Other factors such as race, culture and nationality also seem to influence the coping process (Chapman & Mullis, 2000; Copeland & Hess, 1995; Frydenberg & Lewis, 1993; Frydenberg, Lewis, Kennedy, Ardila, Frindte & Hannoun, 2003; Lee & Larson, 1996; Patterson & McCubbin, 1987; Seiffge-Krenke & Shulman, 1990). For the purposes of this article, the factors of age, gender, and interpersonal relations (such as adolescents' relations with their family and peer group) seem to be relevant.

Age and gender appear to contribute significantly to differences in the development of adolescent psychological symptoms (Hampel & Petermann, 2006). Age and gender influences on coping in adolescents were discussed in Article II.

Interpersonal relationships seem to play an important role in the coping of adolescents. Printz, Shermis and Webb (1999) assert that during adolescence “*support from friends and support from family, as coping resources, serve unequivocal functions*” (p.728). The changing social relationships with parents, siblings and peers during childhood and adolescence influences the degree to which the individual will make use of these relationships as potential sources of information and emotional consolation (Compas, 1998).

Studies have established an association between parental characteristics; including parenting style, parents' ways of coping and children's coping. Parents (and the social contexts in general)

impact on their children's coping. Parents contribute to the psychological (motivational) resources that children have available to them in reacting to and dealing with adversity. Parental effect on one such resource is the child's self-system processes (relatedness, competence and autonomy) that are thought to be key resources when a child interprets and reacts to stressful situations (Compas, 1998). Parents can add warmth, structure and autonomy to support coping interactions or they can add hostility, chaos and coercion. Positive reactions through parental fulfilment of children's needs, boost children's appraisals of the interaction as a challenge, trigger more adaptive action tendencies, and facilitate access to more of the child's existing personal resources for regulation of the situation. Conversely, negative parent actions through their impingement on children's needs, boost children's appraisals of the interaction as threatening, evoke maladaptive tendencies and interfere with children's access to their own existing resources for effective action (Compas, 1998).

Peers also play a key role in the coping and psychological health of adolescents. Adolescents who feel a close connection to peers are at a decreased risk for poor psychological outcomes such as suicidal ideation, poor self-esteem and depression (Hall-Lande, Eisenberg, Christenson & Neumar, 2007). As adolescence approaches, friendships become increasingly important in coping, providing the adolescent the opportunity to engage in new activities, fulfil new and different needs and exhibit new coping responses. Friends, thus, provide much emotional support and coping assistance. However, these relationships may also be a source of strain (Bowker, Bukowski, Hymel & Sippola, 2000; Seiffge-Krenke, 1995).

### **Spiritual well-being and adolescence**

Just like spirituality, well-being is a complex construct, difficult to define. This point is emphasized by Fisher and Brumley (2008) who contend that "*there are many claims in the literature that 'spirituality' and 'well-being' are both multifaceted constructs that are elusive in nature*" (p. 50). However, they add that exhaustive literature reviews also reveal common themes when discussing the combination of these two concepts in the form of spiritual well-being. One of the earliest attempts at a broad definition of spiritual well-being was suggested by The National Interfaith Coalition on Aging (NICA) in 1975. The NICA definition conceptualised spiritual well-being as an affirmation of life in a relationship with oneself (personal), others (communal), nature (environment), and God (or transcendental other) (Ellison, 1983; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a, 2005b). To Ellison (1983) spiritual well-being is an expression of an underlying state of spiritual health. He compared this situation to the colour of an individual's complexion and pulse rate as expressions of his/her health. Fisher (cited in Fisher et al., 2000) describes spiritual health as a fundamental dimension of people's overall

health and well-being. It permeates and integrates all other dimensions (i.e., physical, mental, emotional, social and vocational) of health.

Gomez and Fisher (2003) integrated the above *concepts* to give their definition of spiritual well-being in terms of “*a state of being, reflecting positive feelings, behaviours, and cognitions of relationships with oneself, others, the transcendent and nature, that in turn provide the individual with a sense of identity, wholeness, satisfaction, joy, contentment, beauty, love, respect, positive attitudes, inner peace and harmony, and purpose and direction in life*” (p.1976). Fisher proposed a model of spiritual well-being in a study conducted in 1998 (cited in Fisher et al., 2000; Gomez & Fisher, 2003, 2005a) based on the NICA domains of spiritual well-being. Fisher’s 1998 study was found to be consistent with the NICA model. Fisher (cited in Fisher et al., 2000) argues that spiritual health is a dynamic state of being and is reflected by the extent to which people live in harmony within relationships in the following domains of spiritual well-being: relationships with oneself (personal), others (communal), nature (environment), and God (or transcendental other).

The personal spiritual well-being domain pertains to an intra-relationship with oneself about meaning, purpose and values in life. The human spirit creates a self-awareness concerning the individual’s self-esteem and identity. The communal spiritual well-being domain is expressed in the quality and depth of interpersonal relationships, between the individual and others in relation to morality, culture, and religion. This includes love, justice, hope, and faith in humanity. The environmental spiritual well-being domain is expressed in the care and nurture for the physical and biological, and includes a sense of awe and wonder as well as the notion (for some) of unity and connectedness with the environment. The transcendental domain refers to one’s relationship with some-thing or some-One beyond the human level, such as a cosmic force, transcendent reality, or God. It involves faith, adoration and worship of the source of Mystery of the universe. Fisher also proposed that the four domains of spiritual well-being cohere to give a person’s global or overall dimension of spiritual well-being. The four domains are not isolated, but interrelated. Spiritual health can therefore be enhanced by developing positive relationships in each domain and increased by embracing more domains (Fisher, 2000; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a, 2005b).

Fisher (cited in Fisher et al., 2000) proposed the notion of progressive synergism to describe the relationship among the domains and explain this notion by using the following example. The communal domain builds on and in turn builds up the personal domain. This means that through self awareness (personal domain) meaning, purpose and values develop, which in turn are the precursors to the development of the morality and culture through interpersonal relations (communal domain). However, the development of morality and culture,

in turn, enhance the purpose, meaning and values (personal domain). Similarly a connectedness with nature (environmental domain) should build on and in turn builds up self awareness (personal) and interpersonal relationships (communal), with faith (transcendental well-being) embracing the other three relationships and being nurtured by them.

Nye concluded in her 1998 study that relational consciousness was at the core of children's spirituality, meaning that "*children's spirituality was recognized by a distinctive property of mental activity profound and intricate enough to be termed 'consciousness' and remarkable for its confinement to a broadly relational, inter- and intra-personal domain*" (Hay & Nye, 2006, p.109). Relational consciousness is further conceptualised into four different categories, Child-God consciousness, Child-People consciousness, Child-World consciousness and Child-self consciousness. These categories are respectively similar to the transcendental, communal, environmental and personal spiritual domains of Fisher cited in Gomez and Fisher (2003). Recent studies such as Elton-Chalcraft (2002) and de Souza, Cartwright and McGilp (2004) support these four key domains of spiritual wellbeing.

Francis and Robbins (2008) report on their unique study in 2005, which focussed on operationalising young people's spiritual well-being in terms of Fisher's four domains. Their findings seem to have much overlap with Fisher's model of spiritual well-being. A brief summary of their 2005 study's findings follows. The *personal domain* relates to feelings about oneself - self image and self worth, which in turn, influences meaning and purpose in life, self confidence, trust in own judgments and affect. The *communal domain* relates to the individual's perceptions and feelings about those with whom they share their lives. This domain is therefore associated with the relationships with significant others such as parents and friends. The *environmental domain* is related to individuals' beliefs and feelings about their connectedness with the natural, physical and human global environment. Global and environmental issues such as fair economic trade, pollution, multiculturalism, multi-religious and multi-ethnic societies, and world peace probably matter in this domain. The *transcendental domain* is related to the beliefs and feelings of young people about those aspects of life which transcend the ordinary everyday account of the physical environment. The transcendental domain embraces matters of ultimate concern, cosmic forces, transpersonal phenomena and (in traditional theistic categories) God.

The conceptualization of the transcendental domain is probably more complex to operationalise than the other three domains (Francis & Robbins, 2008). There are varied views of the meaning of the term *transcendence*. Transcending the self could mean the embedding of the self in the sacred (placing oneself in the context of God/s, a chosen people, a divine plan) (Benson, 2006), moving away from an excessive focus on the self (narcissism) towards

focussing on connecting with a Higher Power (e.g., God, Yahweh, the Goddess, etc.) (Hodges, 2002). It could also mean embedding oneself in non-scared traditions of thought ideology, community and vocation (Benson, 2006). Yet another conceptualisation of transcendence is in terms of subsequent levels of increasingly higher and broader scope. For example, the scope of functioning can be broadened from an initial unhealthy self-centeredness, moving to enlightened self-interest by finding personal satisfaction through contributing to the greater good, and then further broadened by functioning centred in humanicentricity, then geocentricity and cosmicentricity (Chandler, Holden & Kolander, 1992).

Francis and Robbins' (2008) operationalisation of Fisher's four domains of spiritual well-being highlight certain important factors related to spiritual well-being. Factors such as identity, self-esteem, meaning and purpose, interpersonal relational influences (e.g. parents, peers and school) as well as spiritual/religious beliefs, institutions and activities influence the development of adolescent spiritual well-being in the different domains. Some of these factors are touched upon in the discussion below with some elaboration given to the religious/spiritual and interpersonal factors influencing adolescent spiritual well-being, since they seem to be especially relevant to this study.

### **Factors related to spiritual well-being**

Adolescence is a period associated with change and a number of developmental tasks such as physical and sexual status, personal identity, financial and psychological independence dimensions (Hoffman, Levy-Shill, Sohlberg & Zarizki, 1992). The key developmental task during adolescence is the resolution of identity, which plays a significant role in promoting adolescent thriving and well-being. Religion and spirituality may make prominent contributions to well-being and thriving of adolescents by directly influencing their identity development (King & Benson, 2006; Markstrom, 1999) and their search for a sense of meaning and purpose in their lives (Cook, 2000; Francis, 2000; Francis & Evans, 1996; Markstrom, 1999; Tzuriel, 1984). Studies have also shown links between religion/spirituality and adolescent self-esteem (Ball, Armistead & Austin, 2003; Cook, 2002; McMahon, Singh, Lakeasha, Garner & Benhorin, 2004; Milevsky & Levitt, 2004; Regnerus, 2002, 2003).

Previous research has investigated the importance of religious/spiritual and social factors (e.g. parents, peers, schools, and communities) on adolescent well-being. As social beings, human beings are relationship-oriented towards others, with nature and with a Higher Power (Koch, 1998). Family, peers and caring unrelated adults are considered to be very important in coping with difficulties, and developing a sense of optimism and self-efficacy (Carbonell, Reinherz & Beardslee, 2005).

In reviewing empirical and theoretical work, relating to adolescent well-being and thriving, King and Benson (2006) concluded that spirituality and religion might provide unique opportunities for the development of well-being and thriving in adolescence. A high degree of religiosity, a sense of spiritual connectedness and the ability to discuss problems with family or friends may serve as protective factors against adverse outcomes during adolescence such as unsatisfactory school performance, suicidal involvement, eating disorder behaviours, pregnancy risk and the use of chemicals (Chandy, Blum & Resnick, 1996). Therefore, formal religiosity may enhance norms that govern close interpersonal relationships. Regular church attendance provides a place for families to gather and socialize, which in turn promotes positive family relationships. Religiosity may be associated with the benefits related to participation in any community (Good & Willoughby, 2006). Muller and Ellison (2001) are of the view that religious involvement has a positive indirect influence, through its association with social capital (parental involvement, peer relations), on several key academic outcomes, as well as adhering to norms and rules. They contend that “*religious involvement may bridge family life and a wider set of intergenerational ties, providing a broader base of community structure and access to resources for some youths*” (p.175).

Research has supported the common sense notion that parents and their religious practices have a very strong influence on the religious behaviour of adolescents. Greater parental religiosity is linked to more cohesive family relationships, lower levels of conflict between parents, and fewer externalizing and internalizing problems in adolescents (Brody, Stoneman & Flor, 1996). Parent-child relationships (as perceived by adolescents) play a significant role in the process of religious socialization in the family in transmitting religious beliefs and practices. Mothers in particular play an important role in the process of transmitting religiousness to their children when positive mother-child relationships exists (Bao, Whitbeck, Hoyt & Conger, 1999). Muller and Ellison (2001) suggest that adolescents may have contradictory needs concerning their parents. They need their parents to be involved, supportive and interested in their lives, but also need their parents to allow them opportunities in developing their independence by forming important relationships as they increasingly engage with peer groups and also start having initial work experiences.

Religious/spiritual practice in families can also have a detrimental influence on the well-being of children and adolescents, when it is used to justify acts such as harsh punishment, withholding of medical treatment, or when parents form a coalition with God as a disciplinary tactic, threatening children that God will punish them if there are disobedient. Some families (possibly due to broader cultural influences) may promote values that are hostile to spirituality, such as bigotry, racism and consumerism (Boyatzis, Dollahite & Marks, 2006).

Religious/spiritual settings may provide positive peer influences on adolescent spiritual well-being. Religious organisations offering activities such as youth camps, summer camps and festivals may provide adolescents with positive peer interactions and peer modelling. These interactions, in turn serve to counter other peer influences to engage in high risk behaviours such as drinking, drug use and early onset of sexual activity (Cook, 2000; Hodge, Cardenas, & Montoya, 2001). Such peer modelling can assist adolescents to more effectively resist peer influences that are in opposition to church standards (Bergin, Stinchfield, Gaskin, Masters & Sullivan, 1988; Cook 2000). The church provides mentors who get involved in the lives of young people and help them make important decisions. (Cook, 2000). Pearce, Little and Perez (2003) found that amongst adolescents, positive interpersonal experience (measured by the extent to which the congregation would offer support if the adolescent was sick and comfort should the adolescent experience difficulty), and negative interpersonal religious experience (measured by the frequency that the congregation makes demands on the adolescent and is critical of what he/she does) had the strongest positive and negative associations, respectively with depressive symptoms than the other dimensions of religiousness.

Based on the above literature review, and the aim of this study, the following research question can be asked: To what extent can coping be used to explain the variation in the spiritual well-being of adolescents?

## **EXPERIMENTAL DESIGN**

### ***Participants and procedure***

Participants were drawn from 10 public high schools located in the Cape Town metropole. Participants' ages ranged from 13 to 20 years. The final sample consisted of 1184 participants. For a full discussion of participants and procedure refer to Article II.

### ***Measuring instruments***

#### *The Adolescent Coping Orientation for Problem Experiences (A – COPE)*

The Adolescent Coping Orientation for Problem Experiences (A – COPE) (Patterson & McCubbin, 1987) coping inventory was used to assess participants' reported use of particular coping behaviours when experiencing problems or when they feel stressed. The instrument is an overall measure of coping and also distinguishes between 12 coping behaviours (coping subscales) grouped conceptually as: ventilating feelings, seeking spiritual support, seeking diversions, investing in close friends, developing self-reliance, seeking professional support, developing social support, engaging in demanding activity, solving family problems, being

humorous, avoiding problems and relaxing. In the application of the ACOPE to this study, raw scores rather than standardised scores were used and were obtained by calculating the sum of items. Refer to Article II for a more detailed discussion of this instrument.

### *The Spiritual Well-Being Questionnaire (SWBQ)*

The Spiritual Well-Being Questionnaire (SWBQ) (Fisher, 2000; Gomez & Fisher, 2003, 2005a) was used to measure participants' spiritual well-being globally as well as in terms of four domains (personal, transcendental, communal and environmental) of spiritual well-being. Each of the domains is represented by five items in the SWBQ. In the application of the SWBQ to this study, raw scores rather than standardised scores were used and were obtained by calculating the sum of items. Refer to Article I for the discussion of this instrument including the revisions in terminology of certain items, the inclusion of additional items to the original SWBQ instrument, as well as the substitution of four items following the factor analyses of the revised instrument.

### *Research hypothesis*

The coping behaviours of adolescents (as measured by the 12 coping subscales of the ACOPE), can be used to explain the variation (at least in part) in the spiritual well-being of adolescents (as measured in terms of the four spiritual domains of the SWBQ).

### *Statistical procedures*

When considering a response to the research question, it is clear that spiritual well-being is the criterion variable. Four different scales (domains) represent spiritual well-being and each scale was used as criteria in this study's analyses. Hierarchical regression analysis was performed to determine the extent to which the variance in each of the spiritual well-being scales of adolescents may be explained by the identified predictors. The procedure followed was to firstly determine the total variance that may be explained by the predictor variables together (entire model) in terms of the criterion variable (four scales independently). Thereafter, each of the predictor variables were systematically omitted (one at a time) to determine that specific variable's unique contribution to the explanation of the variation in the criterion. The percentage variation that is explained by a specific predictor variable is indicated by  $R^2$  (squared multiple correlation coefficient).

The hierarchical F-test was used to determine whether a specific variable's contribution to the  $R^2$ -value is statistically meaningful. When the significance of an increase in  $R^2$  is investigated, then it is also necessary to calculate the effect size of the contributions that a

specific predictor(s) makes. The effect size ( $f^2$ ) gives an indication of the contributions to  $R^2$  in terms of the proportion of unexplained variance in the complete model (Van der Westhuizen, Monteith & Steyn, 1989). According to Cohen (Steyn, 1999) the following guideline values may be used.

$f^2 = 0,01$  : small effect

$f^2 = 0,15$  : medium effect

$f^2 = 0,35$  : large effect

The SAS- computer software programme (SAS Institute, 2001) was used to perform the analyses and the 1%-level of significance was used. Only statistically meaningful results with a medium to large effect size will be further discussed.

## RESULTS AND DISCUSSION

The descriptive statistics (means, standard deviations and correlations) of the variables being studied will firstly be provided in the following tables before the results of the regression-analyses are indicated. The mean scores, and standard deviations in terms of the criteria as well as the predictor variables for the total research sample are indicated in Table 1.

**Table 1: Mean scores and standard deviations for the total research sample**

Variable	N	$\bar{X}$	s
<b>Criteria: Spiritual well-being</b>			
Environmental	1163	17,25	4,17
Transcendental	1167	19,32	4,98
Communal	1173	18,70	3,25
Personal	1167	19,92	3,23
<b>Predictors: Coping Subscales</b>			
Relaxing	1171	13,74	2,97
Seeking diversions	1160	23,30	5,28
Engaging in demanding activity	1167	11,99	3,29
Developing social support	1153	18,67	4,40
Avoiding problems	1166	10,77	3,82
Ventilating feelings	1159	15,93	4,45
Developing self-reliance	1162	19,39	3,59
Investing in close friends	1180	6,72	2,04
Solving family problems	1163	16,51	4,56
Seeking spiritual support	1175	7,35	2,79
Seeking professional support	1178	3,11	1,54
Being humorous	1176	6,45	2,06

From Table 1 it is clear that the mean scores and standard deviations (S.D.) for the criteria variables in this study were calculated at 17,25 (4,17); 19,32 (4,98); 18,70 (3,25) and 19,92 (3,23) for the environmental, transcendental, communal and personal spiritual domains respectively across the different gender and age groups. These results are similar to the mean scores obtained for the original SWBQ (Gomez & Fisher, 2003) in Burnell's (2006) study with

another group of 958 South African adolescents, aged 16-20 years. In Burnell's study the mean scores (S.D.) indicated as 16,83 (3,78); 20,26 (4,24); 19,17 (3,05) and 19,68 (3,34) for the environmental, transcendental, communal and personal spiritual domains respectively across the different gender and age groups.

In terms of the use of the coping strategies (subscales), the mean scores in Table 1 indicate that the coping strategy most frequently used by participants is *seeking diversions*, followed respectively by *developing self-reliance*, *developing social support* and *solving family problems* with the coping strategy least used being *seeking professional support*.

Secondly, intercorrelations between the predictor variables mutually, as well as with the four scales of the criterion (spiritual well-being) were investigated. For this purpose, Pearson's product moment correlation co-efficients were calculated. It was calculated for the total group and the results appear in Table 2.

When linear relationships are the subject of discussion, then according to Steyn (1999), the following guideline values for effect sizes are relevant, namely: 0,1 = small; 0,3 = medium and 0,5 = large effect. Only correlations from 0,3 (or those that approximate to 0,3) are therefore of practical importance and will be referred to in the discussion that follows.

From Table 2 it appears that:

- a) on the 1% level of significance (and with at least a medium effect size) significant positive relationships exist between **environmental** spiritual well-being and i) *engaging in demanding activity* (0,32); ii) *developing self-reliance* (0,25) and iii) *solving family problems* (0,25).
- b) on the 1% level of significance (and with a large effect size) a significant positive relationship exists between **transcendental** spiritual well-being and *seeking spiritual support* (0,59).
- c) on the 1% level of significance (and with at least a medium effect size) significant positive relationships exist between **communal** spiritual well-being and i) *developing social support* (0,42); ii) *solving family problems* (0,31); iii) *developing self-reliance* (0,25) and iv) *investing in close friends* (0,25).
- d) on the 1% level of significance (and with at least a medium effect size) significant positive relationships exist between **personal** spiritual well-being and i) *solving family problems* (0,37); ii) *engaging in demanding activity* (0,25) and iii) *developing self-reliance* (0,25).

**Table 2: Intercorrelations between predictors and spiritual well-being scales for adolescents**

<b>Variables</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
1 Environmental	0,26*	0,35*	0,32*	0,03	0,14*	0,32*	0,19*	-0,12*	-0,07	0,25*	0,05	0,25*	0,15*	0,19*	0,12*
2 Transcendental	-	0,28*	0,42*	0,01	0,09*	0,21*	0,14*	-0,18*	-0,15*	0,17*	0,08*	0,19*	0,59*	0,16*	0,01
3 Communal		-	0,52*	0,11*	0,15*	0,22*	0,42*	-0,05	-0,09*	0,25*	0,25*	0,31*	0,19*	0,12*	0,16*
4 Personal			-	0,001	0,15*	0,25*	0,17*	-0,15*	-0,16*	0,25*	0,19*	0,37*	0,24*	0,13*	0,09*
5 Relaxing				-	0,49*	0,22*	0,39*	0,36*	0,32*	0,30*	0,42*	0,13*	0,16*	0,15*	0,32*
6 Seeking diversions					-	0,47*	0,33*	0,14*	0,17*	0,37*	0,30*	0,31*	0,24*	0,25*	0,27*
7 Engaging in demanding activity						-	0,33*	-0,06	0,003	0,45*	0,20*	0,42*	0,33*	0,28*	0,23*
8 Developing social support							-	0,15*	0,17*	0,46*	0,43*	0,37*	0,33*	0,28*	0,32*
9 Avoiding problems								-	0,35*	0,16*	0,31*	-0,12*	-0,03	0,13*	0,22*
10 Ventilating feelings									-	0,17*	0,18*	0,03	-0,03	0,05	0,21*
11 Developing self-reliance										-	0,31*	0,30*	0,28*	0,20*	0,33*
12 Investing in close friends											-	0,18*	0,19*	0,16*	0,26*
13 Solving family problems												-	0,35*	0,29*	0,19*
14 Seeking spiritual support													-	0,27*	0,10*
15 Seeking professional support														-	0,10*
16 Being humorous															-

\* p <= 0,01

Hierarchical regression analyses were performed for the purposes of investigating the contributions of the twelve coping subscales in explaining the variance of spiritual well-being in adolescents. Since four different subscales were used to get an indication of the spiritual well-being of adolescents, regression analyses were done independently for each of these subscales. Firstly, for each of these subscales,  $R^2$  together with the F-values for the total model (all predictors form part of the regression comparison namely, the 12 coping subscales) were calculated to determine if the predictors together, made any significant contributions to the explanation of the variance for each of the subscales. Secondly, in instances where a significant explanation of variance was found, then the variance was further investigated by means of hierarchical regressions. In order to determine the specific contribution made by each predictor to the variance of a particular subscale, the  $R^2$  value with and then again without the identified predictor was calculated. The significance of the difference in  $R^2$  that appeared, was calculated with the aid of a hierarchical F-test whilst the effect sizes ( $f^2$ ) were also calculated and indicated. The results of the first step (all predictors are in the comparison) are provided in Table 3.

**Table 3: Results of regression analyses for each of the four spiritual well-being scales for all the predictors together**

Criteria/subscales	$\nu$	Sum of squares	F-value	p-value
Environmental	12; 1044	2626,517	14,58*	0,0001
Transcendental	12; 1041	10669	56,85*	0,0001
Communal	12; 1046	2803,296	28,81*	0,0001
Personal	12; 1044	2750,849	27,81*	0,0001

\*  $p \leq 0,01$

From Table 3 it is clear that the predictor variables collectively explain on the 1% level a significant percentage of the variance on all four spiritual well-being scales for adolescents. Further analyses for each of the four criteria variables was performed using hierarchical regressions and the results appear in Tables 4-7.

The results of the hierarchical regression analyses with *environmental spiritual well-being* as criterion are indicated in Table 4.

The results in Table 4 firstly indicate that all the predictor variables together explain 14,35% ( $R^2 = 0,1435$ ) of the variance in *environmental spiritual well-being*. This calculated  $R^2$  value is significant at the 1% level (see Table 3).

**Table 4: Contributions of the different predictors in explaining the variance in the *environmental spiritual well-being* of adolescents**

Variables in analysis	Variable omitted	R <sup>2</sup>	Contributions to R <sup>2</sup>	F	f <sup>2</sup>
1. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	-	0,1435	-	-	-
2. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+	cp12	0,1400	0,0035	4,38	
3. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp12	cp11	0,1346	0,0089	11,13*	0,01
4. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp11+cp12	cp10	0,1433	0,0002	0,25	
5. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp10+cp11+cp12	cp9	0,1399	0,0036	4,50	
6. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp9+cp10+cp11+cp12	cp8	0,1431	0,0004	0,50	
7. cp1+cp2+cp3+cp4+cp5+cp6+cp8+cp9+cp10+cp11+cp12	cp7	0,1352	0,0083	10,38*	0,01
8. cp1+cp2+cp3+cp4+cp5+cp7+cp8+cp9+cp10+cp11+cp12	cp6	0,1432	0,0003	0,38	
9. cp1+cp2+cp3+cp4+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp5	0,1348	0,0087	10,88*	0,01
10. cp1+cp2+cp3+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp4	0,1427	0,0008	1,00	
11. cp1+cp2+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp3	0,1224	0,0211	26,38*	0,02
12. cp1+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp2	0,1434	0,0001	0,13	
13. cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp1	0,1430	0,0005	0,63	

Key: [cp1=relaxing; cp2=seeking diversions; cp3=engaging in demanding activities; cp4=developing social support; cp5=avoiding problems; cp6=ventilating feelings; cp7=developing self-reliance; cp8=investing in close friends; cp9=solving family problems; cp10=seeking spiritual support; cp11=seeking professional support; cp12=being humorous]

\* p ≤ 0,01

When the contributions of the individual predictors to R<sup>2</sup> are investigated, it is clear that the following four coping subscales, *seeking professional support*, *developing self-reliance*, *avoiding problems* and *engaging in demanding activities* make statistically significant contributions at the 1% level, to the explanation of the variance in the *environmental spiritual well-being* of adolescents. However, the corresponding effect sizes (f<sup>2</sup>) for all the predictors are small; therefore the results are not of much importance and will not be discussed any further.

The results of the hierarchical regression analyses with *transcendental spiritual well-being* as criterion are indicated in Table 5.

The results in Table 5 indicate firstly that all predictor variables together explain 39,59% (R<sup>2</sup> = 0,3959) of the variance in *transcendental spiritual well-being*. This calculated R<sup>2</sup> value is at the 1% level of significance (see Table 3).

When the individual contributions of the predictors to R<sup>2</sup> are investigated, it is clear that the following four coping subscales, *seeking spiritual support*, *developing self-reliance*, *ventilating feelings* and *avoiding problems* make a statistically significant contribution at the 1% level to the explanation of the variance in *transcendental spiritual well-being* of adolescents. The corresponding effect sizes (f<sup>2</sup>) indicate that for the predictor *seeking spiritual support*, the result has a large effect and is therefore of practical importance. The remaining three predictors indicate a

small effect and the results are therefore not of much importance and will not be discussed any further.

**Table 5: Contributions of the different predictors in explaining the variation in *transcendental spiritual well-being* of adolescents.**

Variables in analyses	Variable omitted	R <sup>2</sup>	Contribution to (R <sup>2</sup> )	F	f <sup>2</sup>
1. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	-	0,3959	-	-	-
2. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+	cp12	0,3956	0,0003	0,52	
3. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp12	cp11	0,3946	0,0013	2,24	
4. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp11+cp12	cp10	0,1193	0,2766	476,9*	0,46
5. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp10+cp11+cp12	cp9	0,3952	0,0007	1,21	
6. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp9+cp10+cp11+cp12	cp8	0,3939	0,0020	3,45	
7. cp1+cp2+cp3+cp4+cp5+cp6+cp8+cp9+cp10+cp11+cp12	cp7	0,3919	0,0040	6,90*	0,01
8. cp1+cp2+cp3+cp4+cp5+cp7+cp8+cp9+cp10+cp11+cp12	cp6	0,3907	0,0052	8,97*	0,01
9. cp1+cp2+cp3+cp4+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp5	0,3778	0,0181	31,21*	0,03
10. cp1+cp2+cp3+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp4	0,3957	0,0002	0,35	
11. cp1+cp2+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp3	0,3953	0,0006	1,03	
12. cp1+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp2	0,3942	0,0017	2,93	
13. cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp1	0,3957	0,0002	0,34	

Key: [cp1=relaxing; cp2=seeking diversions; cp3=engaging in demanding activities; cp4=developing social support; cp5=avoiding problems; cp6=ventilating feelings; cp7=developing self-reliance; cp8=investing in close friends; cp9=solving family problems; cp10=seeking spiritual support; cp11=seeking professional support; cp12=being humorous]

\* p ≤ 0,01

This result indicates that there is a significant positive association between the coping subscale *seeking spiritual support* and the *transcendental spiritual well-being* domain. This result is expected and plausible given the fact that both the variables are concerned with the individual's relationship with some-thing or some-One beyond the human level, such as a cosmic force, transcendent reality, or God. Transcendental spiritual well-being involves faith, adoration and worship of the source of Mystery of the universe (Fisher, 2000; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a; 2005b). Self transcendence could mean the embedding of the self in the sacred (placing oneself in the context of God/s, a chosen people, a divine plan) (Benson, 2006), and focussing on connecting with a Higher Power (e.g., God, Yahweh, the Goddess, etc.) (Hodges, 2002).

This result could also be explained in terms of Fowler's theory of faith development, which posits that adolescents are in the synthetic-conventional faith stage. This stage is characterised by complex development in cognitive functioning and the emergence of formal operational thinking. The individual has to integrate diverse self images into a coherent identity. Personality becomes a

conscious issue with the environment being constructed in terms of the personal. In dealing with new issues of identity, there is an often unrecognised religious hunger for more personal relations with God, who knows and loves the individual, despite the individual feeling awkward about him/herself. God can be represented by personal qualities of accepting love, understanding, loyalty, and support during times of crisis (Fowler, 1991; Fowler & Dell, 2006). Thus, adolescents may look to God as a source of coping and consequently may experience better well-being because spirituality and religion may provide adolescents opportunities for the development of well-being and thriving by directly influencing identity development (King and Benson, 2006). This view is further supported by the findings of several studies that spiritual/ religious coping mediates the relationship between a variety of stressors and psychological health (Demir & Urberg, 2004; Francis & Evans; 1996; Maharajh, Ali & Konings; 2006; Schaefer & Gorsuch, 1993) and that religious involvement may promote the successful mastery of adolescent developmental tasks (Schludermann, Schludermann & Huynh, 1997). Francis and Robbins (2008) are of the view that when young people are enjoying a high level of spiritual health within a social context that values a theistic interpretation of life, they are likely to affirm the existence of God.

Interestingly this result is also consistent with the result in Article II, where the three spiritual/ religious variables (*importance of religion/spirituality, frequency of church attendance and the frequency of prayer*) were also found to have meaningful positive associations with the coping variable, *seeking spiritual support*. Thus, together these findings indicate coherent positive associations between spirituality/religion, spiritual/religious coping and transcendental well-being, which is plausible.

The results of the hierarchical regression analyses with *communal spiritual well-being* as criterion are indicated in Table 6.

The results in Table 6 firstly indicate that all the predictor variables together explain 24,84% ( $R^2 = 0,2484$ ) of the variance in *communal spiritual well-being* of adolescents. This calculated  $R^2$  value is at the 1% level of significance (see Table 3).

**Table 6: Contributions of the different predictors in explaining the variation in communal spiritual well-being of adolescents.**

Variables in analyses	Variable omitted	R <sup>2</sup>	Contribution to (R <sup>2</sup> )	F	f <sup>2</sup>
1. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	-	0,2484	-	-	-
2. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+	cp12	0,2475	0,0009	1,29	
3. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp12	cp11	0,2478	0,0006	0,86	
4. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp11+cp12	cp10	0,2483	0,0001	0,14	
5. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp10+cp11+cp12	cp9	0,2358	0,0026	3,71	
6. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp9+cp10+cp11+cp12	cp8	0,2379	0,0105	15,00*	0,01
7. cp1+cp2+cp3+cp4+cp5+cp6+cp8+cp9+cp10+cp11+cp12	cp7	0,2448	0,0036	5,14	
8. cp1+cp2+cp3+cp4+cp5+cp7+cp8+cp9+cp10+cp11+cp12	cp6	0,2321	0,0163	23,29*	0,02
9. cp1+cp2+cp3+cp4+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp5	0,2450	0,0034	4,86	
10. cp1+cp2+cp3+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp4	0,1755	0,0729	104,1*	0,11
11. cp1+cp2+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp3	0,2484	0,0000	0,00	
12. cp1+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp2	0,2462	0,0022	3,14	
13. cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp1	0,2483	0,0001	0,14	

Key: [cp1=relaxing; cp2=seeking diversions; cp3=engaging in demanding activities; cp4=developing social support; cp5=avoiding problems; cp6=ventilating feelings; cp7=developing self-reliance; cp8=investing in close friends; cp9=solving family problems; cp10=seeking spiritual support; cp11=seeking professional support; cp12=being humorous]

\* p ≤ 0,01

When the individual predictor contributions to R<sup>2</sup> are investigated, it is clear that the following three coping scales, *investing in close friends*, *ventilating feelings en developing social support* make statistically significant contributions at the 1% level to the explanation of the variance in the *communal spiritual well-being* of adolescents. The *corresponding* effect sizes (f<sup>2</sup>) indicate that for the indicator *developing social support* the result has a medium effect and is therefore of moderate practical importance. The remaining two predictors indicate a small effect and the results are therefore not of much practical importance and will not be discussed any further.

This result suggests a moderate positive association between the coping subscale *developing social support* and the *communal spiritual well-being* domain. Again this result is expected and plausible given the importance of interpersonal relationships in expressing the quality and depth of the communal spiritual well-being domain. Interpersonal relationships between the individual and others, is considered in relation to morality, culture, and religion. This includes love, justice, hope, and faith in humanity (Fisher, 2000; Fisher et al., 2000; Gomez & Fisher, 2003, 2005a, 2005b).

Furthermore, Francis and Robbins (2008), in their operationalisation of spiritual well-being in adolescents, assert that a high level of communal spiritual well-being in young people is expressed by positive feelings about other people and the affirmation of their relationships with parents, friends and school. Family, peers and significant others play important roles in adolescent

coping (Bryant, 2007; Compas, 1998; Seiffge-Krenke, 1995) and in developing optimism and self efficacy (Carbonell et al., 2005). The significant influence of interpersonal relationships on adolescent well-being is highlighted by research suggesting that the vast majority of stressors (80%) experienced by adolescents are associated with relationships (Seiffge-Krenke, 1995).

Adolescent perceptions of positive interpersonal experiences with faith organisations suggest strong associations with adolescent well-being (versus negative interpersonal experiences and depression) (Pearce et al., 2003). Furthermore, spiritual disclosure within the family (Brelsford & Mahoney, 2008) and having friends who share the same beliefs, and discuss matters of a spiritual nature – exposing the individual to different viewpoints, different ways of life, and new perspectives on the world and social issues (Bryant, 2007) emphasises the value of attending to the interpersonal dimension of religion/spirituality. In particular, religion and spirituality provide an environment in which the adolescent “*can experience the self embedded within a larger context that simultaneously validates the inherent value of the self as well as promotes a sense of belonging and connectedness beyond the self*” (King & Benson, 2006, p. 392) through intergenerational, enduring, caring relationships and nurtures the growth of spiritual resources (e.g., faith, hope, benevolence, and divine grace) (Regnerus, 2003).

This result may also be explained by Fowler’s theory of faith development. According to his theory, during adolescence, mutual interpersonal taking emerges due to cognitive development and formal operational thinking. Mutual interpersonal taking makes youths acutely sensitive to the meanings they seem to have for others and the evaluations those meanings imply. During this stage youth develop attachments to beliefs, values and elements of personal styles that link them in conforming relations with significant others such as peers, family and other non-family adults (Fowler, 1991; Fowler & Dell, 2006). The views of the self that emerges occurs in relationships with peers, parents and others. Where social conditions and favourable personal relationships support the adolescent in building a stable sense of identity, in preparation of commitment to friendships, future work roles, religious and other ideological visions and communities, the emergence of the ego strength of fidelity can be expected (Fowler, 1981). The world views (beliefs, values and commitments) of adolescents are shaped by persons and contexts that offer stories, ideals, beliefs systems, rituals, and role models that respond to their hunger for adult truth (Fowler, 1991).

The results of hierarchical regression analyses with *personal spiritual well-being* as criterion is indicated in Table 7.

**Table 7: Contributions of the different predictors in the explanation of the variation on *personal spiritual well-being* of adolescents.**

Variables in analyses	Variable omitted	R <sup>2</sup>	Contribution to (R <sup>2</sup> )	F	f <sup>2</sup>
1. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	-	0,2422	-	-	-
2. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+	cp12	0,2418	0,0004	0,57	
3. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp12	cp11	0,2421	0,0001	0,14	
4. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp11+cp12	cp10	0,2400	0,0022	3,14	
5. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp10+cp11+cp12	cp9	0,1969	0,0453	64,71*	0,06
6. cp1+cp2+cp3+cp4+cp5+cp6+cp7+cp9+cp10+cp11+cp12	cp8	0,2160	0,0262	37,43*	0,03
7. cp1+cp2+cp3+cp4+cp5+cp6+cp8+cp9+cp10+cp11+cp12	cp7	0,2207	0,0215	30,71*	0,03
8. cp1+cp2+cp3+cp4+cp5+cp7+cp8+cp9+cp10+cp11+cp12	cp6	0,2228	0,0194	27,71*	0,03
9. cp1+cp2+cp3+cp4+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp5	0,2324	0,0098	14,00*	0,01
10. cp1+cp2+cp3+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp4	0,2381	0,0041	5,86	
11. cp1+cp2+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp3	0,2411	0,0011	1,57	
12. cp1+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp2	0,2420	0,0002	0,29	
13. cp2+cp3+cp4+cp5+cp6+cp7+cp8+cp9+cp10+cp11+cp12	cp1	0,2415	0,0007	1,00	

Key: [cp1=relaxing; cp2=seeking diversions; cp3=engaging in demanding activities; cp4=developing social support; cp5=avoiding problems; cp6=ventilating feelings; cp7=developing self-reliance and optimism; cp8=investing in close friends; cp9=solving family problems; cp10=seeking spiritual support; cp11=seeking professional support; cp12=being humorous]

\* p ≤ 0,01

The results in Table 7 firstly indicate that all the predictor variables together explain 24,22% (R<sup>2</sup> = 0,2422) of the variance in *personal spiritual well-being* of adolescents. This calculated R<sup>2</sup> value is significant at the 1% level (see Table 3).

When the individual predictor contributions to R<sup>2</sup> are investigated, it is clear that the following five coping scales *solving family problems*, *investing in close friends*, *developing self-reliance*, *ventilating feelings* and *avoiding problems* make a statistically significant contribution at the 1% level, to the explanation of the variance in *personal spiritual well-being* of adolescents.

However, the corresponding effect sizes (f<sup>2</sup>) are small for all the predictors. Thus the results are of little practical importance and will therefore not be discussed any further.

## Summary

In responding to the research question of this study, significant correlations were found between adolescents' coping (represented by 12 coping subscales) and spiritual well-being (represented by four domains). However, further analyses of the correlations in terms of effect size revealed only 2 correlations of medium to large practical significance.

- A significant positive association suggesting practical importance (large effect size) was found for the coping subscale *seeking spiritual support* and the *transcendental spiritual well-being*

domain. This result was expected, since both variables are concerned with the individual's relationship with some-thing or some-One beyond the human level, such as a cosmic force, transcendent reality, or God (Fisher, 2000; Fisher et al., 2000; Francis & Robbins, 2008; Gomez & Fisher, 2003, 2005a, 2005b). This result is consistent with the result in Article II, where the three spiritual/ religious variables (*importance of religion/spirituality*, *frequency of church attendance* and the *frequency of prayer*) were also found to have meaningful positive associations with the coping variable, *seeking spiritual support*. Taken together, these findings suggest coherent positive associations between spirituality/religion, spiritual/religious coping and transcendental well-being which is plausible.

- A significant positive association with medium effect size, suggesting moderate practical importance, was found for the coping subscale *developing social support* and the *communal spiritual well-being* domain. Again, this result is expected and plausible given the importance of interpersonal relationships in expressing the quality and depth of the communal spiritual well-being domain (Fisher, 2000; Fisher et al., 2000; Francis & Robbins, 2008; Gomez & Fisher, 2003, 2005a, 2005b).

### **Limitations and recommendations**

The different (sometimes contentious) positions taken by various scholars, regarding the conceptualization of the construct, spirituality, may be a limiting factor in itself. On the other hand, this study may be the first attempt at examining the relationship between coping and spiritual well-being amongst a group of South African adolescents, thus possibly contributing to a better understanding of this relationship. Information for this study was gathered using self-reporting which may be a limiting factor. Other sources of information such as parent and teacher ratings may have influenced the findings of this study (Good & Willoughby, 2006). A longitudinal approach (Martin, Kirkcaldy & Siefen, 2003) in studying the relationship between coping and spiritual well-being, may have revealed more insightful findings, especially if such a study accounted for potential confounding variables such as religion, race and culture which have been shown to variously impact on the coping (Chapman & Mullis, 2000; Frydenberg et al., 2003) and religiosity/spirituality (Mohr, 2006) of adolescents. This study needs to be replicated in terms of different groupings (age, gender, ethnicity, culture, urban vs. rural, etc.) before generalisations can be made about the relationship between coping and spiritual well-being in the broader South African adolescent population.

## REFERENCES

- Ball, J., Armistead, L., & Austin, B. (2003). The relationship between religiosity and adjustment among African-American, female, urban adolescents. *Journal of Adolescence* 26, 431–446.
- Bao, W., Whitbeck, L. B., Hoyt, D.R., & Conger, R.D. (1999). Perceived parental acceptance as a moderator of religious transmission among adolescent boys and girls. *Journal of Marriage and the Family*, 61, 362-374.
- Benson, P.L. (2006). The science of child and adolescent spiritual development: Definitional, theoretical, and field-building challenges. In E.C. Roehlkepartain; P.E. King; L. Wagener, & P.L. Benson. (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 484-497). Thousand Oaks California: Sage Publication, Inc.
- Benson, P.L., Roehlkepartain, E.C., & Rude, S.P. (2003). Spiritual development in childhood and adolescence. Toward a field of inquiry. *Applied Developmental Sciences*, 7(3), 205-213.
- Bergin, A.E., Stinchfield, R.D., Gaskin, T.A., Masters, K.S., & Sullivan, C.E. (1988). Religious life-styles and mental health: An exploratory study. *Journal of Counseling Psychology*, 35, 91-98.
- Bowker, A., Bukowski, W. M., Hymel, S., & Sippola, L. K. (2000). Coping with daily hassles in the peer group in early adolescence: Variations as a function of peer experience. *Journal of Research on Adolescence*, 10, 211–243.
- Boyatzis, C. J., Dollahite, D. C. & Marks, L. D. (2006). The family as a context for religious and spiritual development in children and youth. In E. C. Roehlkepartain, P. E. King, L. M. Wagener & P. L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 297-309). Thousand Oaks, CA: Sage Publications.
- Brelsford, G.M. & Mahoney, A. (2008). Spiritual disclosure between older adolescents and their mothers. *Journal of Family Psychology*, 22(1), 62–70.

- Brody, G.H., Stoneman, Z., & Flor, D. (1996). Parental religiosity, family processes, and youth competence in rural, two-parent African American families. *Developmental Psychology*, 32(4), 696-706.
- Bryant, A. (2007). Gender differences in spiritual development during the college years. *Sex Roles*, 56, 835-846.
- Burnell, B. (2006). *The relationship between spiritual well-being and a sense of meaning in life in late adolescence*. Unpublished Thesis, University of Free State.
- Carbonell, D.M., Reinherz, H.Z., Beardslee, W. R. (2005). Adaptation and coping in childhood and adolescence for those at risk for depression in emerging adulthood. *Child and Adolescent Social Work Journal*, 22(5-6), 395-416.
- Chandler, C.K., Holden, J.M., Kolander, C.A. (1992). Counseling for spiritual wellness: Theory and practice. *Journal of Counseling and Development*, 71(2), 168-175.
- Chandy, J.M., Blum, R.W., & Resnick, M. D. (1996). History of sexual abuse and parental alcohol misuse: Risk, outcomes and protective factors in adolescents. *Child and Adolescent Social Work Journal*, 13(5), 411-432.
- Chapman, P.L., & Mullis, R.L. (2000). Racial differences in adolescent coping and self-esteem. *The Journal of Genetic Psychology*, 161(2), 152-160.
- Compas, B.E. (1998). An agenda for coping research and theory: Basic and applied developmental issues. *International Journal of Behavioural Development*, 22(2), 231-237.
- Compas, B.E., Connor-Smith, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, 127(1), 87-127.

- Cook, K.V. (2000). "You have to have somebody watching your back, and if that's God, then that's mighty big." The church's role in the resilience of inner-city youth. *Adolescence*, 35(140), 717-730.
- Copeland, E.P., & Hess, R.S. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *Journal of Early Adolescence*, 15(2), 203-219.
- Crawford, E., O'Dougherty Wright, M., & Masten, A.S. (2006). Resilience and spirituality in youth. In E.C. Roehlkepartain, P.E. King; L. Wagener, & P.L. Benson. (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 355-370). Thousand Oaks California: Sage Publication, Inc.
- Davis, T.L., Kerr, B.A., & Robinson Kurpius, S.E. (2003). Meaning, purpose, and religiosity in at-risk youth: The relationship between anxiety and spirituality. *Journal of Psychology and Theology*, 31(4), 356-365.
- Demir, M., & Urberg, K.A. (2004). Church attendance and well-being among adolescents. *Journal of Beliefs & Values*, 25(1), 63-68.
- de Souza, M., Cartwright, P. & McGilp, E. J. (2004). The perceptions of young people who live in a regional city in Australia of their spiritual well-being: Implications for education. *Journal of Youth Studies*, 7(2), 155-172.
- Ebata, A.T., & Moos, R.H. (1994). Personal, situational, and contextual correlates of coping in adolescence. *Journal of Research on Adolescence* 4(1), 99-125.
- Elkins, D.N., Hedstrom, L.J., Hughes, L.L., Leaf, J.A., & Saunders, C. (1988). Toward a humanistic phenomenological spirituality: Definition, description and measurement. *Journal of Humanistic Psychology*, 28(4), 5-18.
- Ellison, C.W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11(4), 330-340.

- Elton-Chalcraft, S. (2002). Empty wells: How well are we doing at spiritual well-being? *International Journal of Children's Spirituality*, 7(3), 309–328.
- Fisher, J. W. (2000). Being human and becoming whole: Understanding spiritual health and well-being. *Journal of Christian Education*, 43(3), 37-52.
- Fisher, J.W., & Brumley, D. (2008). Nurses' and carers' spiritual wellbeing in the workplace. *Australian Journal of Advanced Nursing*, 25(4), 49-57.
- Fisher, J.W., Francis, L.J., & Johnson, P. (2000). Assessing spiritual health via four domains of spiritual well-being: The SH4DI. *Pastoral Psychology*, 49(2), 133-145.
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. New York: Harper & Row.
- Fowler, J.W. (1991). *Weaving the new creation: Stages of faith and the public church*. San Francisco: Harper
- Fowler, J.W., & Dell, M.L. (2006). Stages of faith from infancy through adolescence: Reflections on three decades of faith developmental theory. In *The handbook of spiritual development in childhood and adolescence*. By E.C. Roehlkepartain; P.E. King; L. Wagener, & P.L. Benson. (Eds.). (pp. 34 – 45). Thousand Oaks California: Sage Publication, Inc.
- Francis, L.J. (2000). The relationship between Bible reading and purpose in life among 13-15 year olds. *Mental Health, Religion & Culture*, 3(1), 27-36.
- Francis, L.J. & Evans, T.E. (1996). The relationship between personal prayer and purpose in life among churchgoing and non-churchgoing 12–15-year olds in the UK, *Religious Education*, 91, 9–21.

- Francis, L.J., & Robbins, M. (2008). The relationship between denominational affiliation and spiritual health among weekly- churchgoing 13- to 15-year-old adolescents in England and Wales. *Journal of Education and Christian Belief*, 12(1), 21-39.
- Frydenberg, E. (1997). *Adolescent coping. Theoretical and research perspectives*. London: Routledge.
- Frydenberg, E., & Lewis, R. (1991). Adolescent coping: The different ways in which boys and girls cope. *Journal of Adolescence* 14, 119-133.
- Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others: Age, gender and ethnicity as determinants of coping. *Journal of Adolescence*, 16, 253-266.
- Frydenberg, E., Lewis, R., Kennedy, G., Ardila, R., Frindte, W., & Hannoun, R. (2003). Coping with concerns: An exploratory comparison of Australian, Colombian, German, and Palestinian Adolescents. *Journal of Youth and Adolescence*, 32(1), 59–66.
- Gomez, R., & Fisher, J. W. (2003). Domains of spiritual well-being and development and validation of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences*, 35, 1975-1991.
- Gomez, R., & Fisher J.W. (2005a). Item response theory analysis of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences*, 38, 1107-1121.
- Gomez, R., & Fisher J.W. (2005b). The Spiritual Well-Being Questionnaire: Testing for model applicability, measurement and structural equivalencies and latent mean differences across gender. *Personality and Individual Differences*, 39(8): 1383-1393.
- Good, M., & Willoughby, T. (2006). The role of spirituality versus religiosity in adolescent psychosocial adjustment. *Journal of Youth and Adolescence*, 35(1), 41–55.

- Hall-Lande, J.A., Eisenberg, M.E., Christenson, S.L., & Neumar, D. (2007). Social isolation, psychological health and protective factors in adolescence. *Adolescence*, 42(166), 265- 286.
- Hampel, P, & Petermann, F. (2006). Perceived stress, coping, and adjustment in adolescents. *Journal of Adolescent Health* 38, 409–415.
- Hay, D., & Nye, R. (2006). *The Spirit of the child*. London: Jessica Kingsley Publishers.
- Hodge, D.R., Cardenas, P., & Montoya, H. (2001). Substance use: Spirituality and religious participation as protective factors among rural youths. *Social Work Research*, 25(3), 153-161.
- Hodges, S. (2002). Mental health, depression, and dimensions of spirituality and religion. *Journal of Adult Development*, 9(2), 109-115.
- Hoffman, M. A., Levy-Schiff, R., Sohlberg, S. C., and Zarizki, J. (1992). The impact of stress and coping: Developmental changes in the transition to adolescence. *Journal of Youth and Adolescence*. 27, 451– 469.
- Kaye, J., & Raghavan, S.K. (2002). Spirituality in disability and illness. *Journal of Religion and Health*, 41(3), 231-242.
- King, P.E., & Benson, P. L. (2006). Spiritual development and adolescent well-being and thriving. In E.C. Roehlkepartain; P.E. King; L. Wagener, & P.L. Benson. (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 384-398). Thousand Oaks California: Sage Publication, Inc.
- Koch,G. R. (1998). Spiritual empowerment: A metaphor for counseling. *Journal of Counseling and Values*, 43, 19–28.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

- Lee, M., & Larson, R. (1996). Effectiveness of coping in adolescence: The case of Korean examination stress. *International Journal of Behavioural Development, 19*(4), 851-869.
- Lippman, L.H., & Keith, J.D. (2006). The demographics of spirituality among youth: International perspectives. In E.C. Roehlkepartain, P. E. King., L. M. Wagener & P. L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 109-123). Thousand Oaks, CA: Sage Publications.
- Maharajh, H. D., Ali, A., Konings, M. (2006). Adolescent depression in Trinidad and Tobago. *European Child & Adolescent Psychiatry, 5*(1), 30-37.
- Mahoney, A., Pendleton, S., & Ihrke, H. (2006). Religious coping by children and adolescents: Unexplored territory in the realm of spiritual development. In E.C. Roehlkepartain, P. E. King., L. M. Wagener & P. L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 341 – 354). Thousand Oaks California: Sage Publication, Inc
- Markstrom, C. A. (1999). Religious involvement and adolescent psychosocial development. *Journal of Adolescence, 22*, 205-221.
- Martin, T. Kirkcaldy, B., & Siefen, G. (2003). Antecedents of adult wellbeing: Adolescent religiosity and health. *Journal of Managerial Psychology, 18*(5), 453-470.
- McMahon, S.D., Singh, J.A., Lakeasha, M.A., Garner, S., & Benhorin, S. (2004). Taking advantage of opportunities: Community involvement, well-being, and urban youth. *Journal of Adolescent Health, 34*, 262–265.
- Meehan, S., Peirson, A., & Fridjhon, P. (2007). Suicide ideation in adolescent South Africans: The role of gender and coping strategies. *South African Journal of Psychology, 37*(3), 552–575.
- Milevsky, A., & Levitt, M.J. (2004). Intrinsic and extrinsic religiosity in preadolescence and adolescence: Effect on psychological adjustment. *Mental Health, Religion & Culture, 7*(4), 307–321.

- Mohr, W. K. (2006). Spiritual issues in psychiatric care. *Perspectives in Psychiatric Care*, 42(3), 174-183.
- Muller, C., & Ellison, C.G. (2001). Religious involvement, social capital, and adolescents' academic progress: Evidence from The National Education Longitudinal Study of 1988. *Sociological Focus*, 34(2), 155-183.
- Pargament, K.I. (1997). *The Psychology of religion and coping: theory, research, practice*. New York: Guilford Press.
- Pargament, K.I., & Mahoney, A. (2005). Sacred matters: Sanctification as a vital topic for the psychology of religion. *International Journal for the Psychology of Religion*, 15, 179-198.
- Patterson, J.M. & McCubbin, H.I. (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence*, 10, 163-186.
- Pearce, M.J., Little, T.D., & Perez, J.E. (2003). Religiousness and depressive symptoms among adolescents. *Journal of Clinical Child and Adolescent Psychology*, 32(2), 267-276.
- Printz, B.L., Shermis, M.D., & Webb, P.M. (1999). Stress-buffering factors related to adolescent coping: A path analysis. *Adolescence*, 34(136), 715-734.
- Regnerus, M.D., (2002). Shaping schooling success: Religious socialization and educational outcomes in metropolitan public schools. *Journal for the Scientific Study of Religion* 39, 363-370.
- Regnerus, M.D. (2003). Religion and positive adolescent outcomes: A review of research and theory. *Review of Religious Research*, 44(4), 394-413.
- Richaud de Minzi, M.C. (2003). Coping assessment in adolescents. *Adolescence*, 38(150), 321-330.
- SAS Institute (2001). *SAS user's guide: Statistics version 8.2 edition*. Cary: Author.

- Schaefer, C.A., & Gorsuch, R.L. (1993). Situational and personal variations in coping. *Journal for the Scientific Study of Religion*, 32(2), 136-147.
- Schludermann, E., Schludermann, S. & Huynh, C. (1997). *Catholic Schools Study Report: Religiosity, Values and Adjustment*, 1-46.
- Seiffge-Krenke, I. (1995). *Stress, coping and relationships in adolescence*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Seiffge-Krenke, I. (2006). Coping with relationship stressors: The impact of different working models of attachment and links to adaptation. *Journal of Youth and Adolescence*, 35(1), 25–39.
- Seiffge-Krenke, I., & Shulman, S. (1990). Coping style in adolescents. A cross-cultural study. *Journal of Cross-Cultural Psychology*, 21, 351–377.
- Singleton, A., Mason, M., & Webber, R. (2004). Spirituality in adolescence and young adulthood: A method for a qualitative study. *International Journal of Children's Spirituality*, 9(3), 247-262.
- Smith, C. (2003). Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion* 42(1), 17-30.
- Steyn, H.S. (1999). *Praktiese beduidendheid: die gebruik van effekgroottes*. Potchefstroom: Publikasiebeheer Komitee, PU vir CHO.
- Templeton, J.L., Eccles, J.S. (2006). The relation between spiritual development and identity processes. In .C. Roehlkepartain; P.E. King; L. Wagener, & P.L. Benson. (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 252-265). Thousand Oaks California: Sage Publication, Inc.
- Tzuriel, D. (1984). Sex role typing and ego identity in Israeli, Oriental, and Western adolescents. *Journal of Personality and Social Psychology*, 46, 440-457.

Van der Westhuizen, G.J.; Monteith, J.L. & Steyn, H.S. (1989). Relative contribution of different sets of variables to the prediction of the academic achievement of black students. *South African Journal of Education*, 9(4), 769-773.

Zinnbauer, B. J., Pargament, K. I., Cole, B.; Rye, M. S., Butter, E. M. Belavich, T. G., Hipp, K. M., Scott, A.B., & Kadar, J.L.. (1997). Religion and spirituality: Unfuzzifying the fuzzy. *Journal for the Scientific Study of Religion*, 36(4), 549-564.