

UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

SPIRITUALITY, MEANING IN LIFE AND SUBJECTIVE WELL-BEING: A STUDY OF
SELECTED COMMUNITIES IN GREATER ACCRA AND VOLTA REGIONS

BY

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DECLARATION

I hereby declare that this thesis is my own work produced under the supervision of faculties in the Department of Psychology, University of Ghana. No part of this thesis has been presented for another degree by anyone for any academic award in this university or elsewhere. All references used have been duly acknowledged.

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ABSTRACT

Well-being is thought to differ according to whether one resides in a rural or urban area. In addition, spirituality and religious support have been firmly established as important predictors of well-being in late adulthood. However, the mechanism through which they influence well-being is less known. Therefore, this cross-sectional study assessed the mediating roles of the presence of meaning and optimism in the relationships among the predictors, subjective well-being and the wish to die among older people. Additionally, the study examined rural and urban differences in subjective well-being and the wish to die. A sample of 215 older people who were at least 60 years from selected rural ($N = 120$) and urban ($N = 115$) settings participated in the study. The results of the study showed that rural residents scored lower levels of subjective well-being and higher levels of the wish to die than urban residents. The presence of meaning and optimism mediated the relationships between spirituality and the well-being indicators. For religious support, the presence of meaning and optimism mediated only its relationship with subjective well-being but not with the wish to die. The implications of the study to mental health professionals and faith communities have been discussed together with limitations and recommendations for future studies.

DEDICATION

I dedicate this thesis to my parents, Mr. Kenneth Kofi Aglozo and Mrs. Praise Akoto. They have been supportive throughout the process of producing this work. The thesis is also dedicated to my senior brother, Charles Aglozo who has supported me enormously.

I also dedicate this thesis to all the participants of the study. They are wonderful people!



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Adwen, yes, Adwen. How could I forget you? Thank you for your infectious optimism.

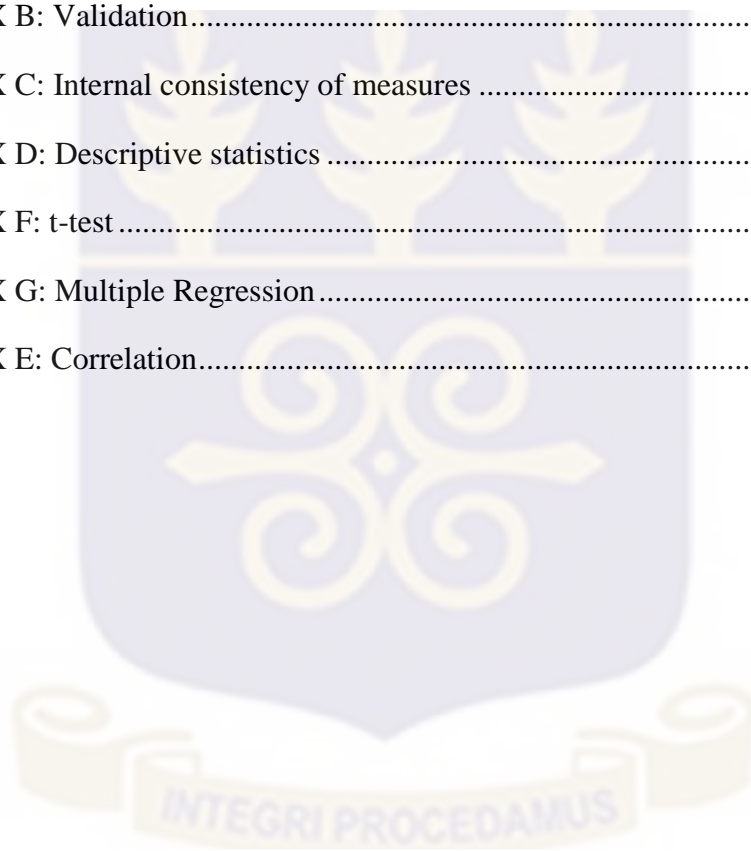
And to my family, I say thank you to you all.

TABLE OF CONTENTS

DECLARATION	i
ABSTRACT.....	ii
DEDICATION.....	iii
ACKNOWLEDGMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS.....	x
CHAPTER ONE.....	1
INTRODUCTION	1
Background of the study.....	1
Problem Statement.....	13
Aims and Objectives of the Study	15
Significance of the Study.....	15
CHAPTER TWO	17
LITERATURE REVIEW	17
Introduction	17
Theoretical Framework.....	17
Review of related studies.....	24
Rationale of the Study	37
Conceptual Framework of the Study	39
Statement of Hypotheses	40
Operational Definition.....	41
CHAPTER THREE	43
METHODOLOGY	43

Introduction	43
Research Design	43
Research Setting	43
Population of the Study	44
Sample and Sampling Technique	45
Sample Size	45
Sample Characteristics	48
Measures	48
Procedure for Data Collection	53
Pilot study	54
The Main Study	56
Data Analysis.....	57
Ethical Consideration	57
CHAPTER FOUR.....	58
RESULTS	58
Validation of Measures.....	58
Reliability of Measures.....	64
Descriptive statistics	65
Correlation	67
Preliminary assumptions for multiple regression analysis	69
Multiple regression analyses	70
Summary of findings	78
CHAPTER FIVE	81
DISCUSSION.....	81
Rural-urban comparison on well-being	81
Meaning in life as a mediator	82
Optimism as a mediator.....	89

Contributions to literature.....	92
Practical implications of the study.....	93
Limitations of the study.....	95
Directions for future studies.....	96
Conclusion.....	97
REFERENCES.....	99
APPENDICES.....	118
APPENDIX A: Questionnaire.....	118
APPENDIX B: Validation.....	128
APPENDIX C: Internal consistency of measures.....	139
APPENDIX D: Descriptive statistics.....	146
APPENDIX F: t-test.....	148
APPENDIX G: Multiple Regression.....	149
APPENDIX E: Correlation.....	162



LIST OF TABLES

Table 1: Socio-demographic characteristics of the sample of older people.....	46
Table 2: Internal consistency of the measures used in the pilot study.....	55
Table 3.1: Principal Components Analysis with Varimax Rotation of Two Factor Solution of SEI-R items.....	60
Table 3.2: Principal Components Analysis with Varimax Rotation of Two Factor Solution of MLQ items.....	61
Table 3.3: Principal Components Analysis with Oblimin Rotation of Three Factor solution of SPANE items.....	63
Table 4: Internal consistency of measures used in the study.....	64
Table 5: Descriptive statistics of the main variables (N= 235).....	66
Table 6: Pearson correlation among the variables of interest.....	67
Table 7: Differences in subjective well-being between rural and urban residents.....	68
Table 8: Differences in the wish to die between rural and urban residents.....	69
Table 9: Hierarchical Multiple Regression Analysis of predictors of subjective well-being (N= 235).....	72
Table 10: Hierarchical Multiple Regression Analysis of predictors of the wish to die (N = 235).....	73
Table 11: Meaning as a Mediator in Spirituality-Subjective Well-being and Spirituality-Wish to die.....	74
Table 12: Optimism as a Mediator in Spirituality-Subjective Well-being and Spirituality-Wish to die.....	75
Table 13: Meaning as a Mediator in Religious support-Subjective Well-being and Religious support-Wish to die.....	76
Table 14: Meaning as a Mediator in Religious support-Subjective Well-being and Religious support-Wish to die.....	77

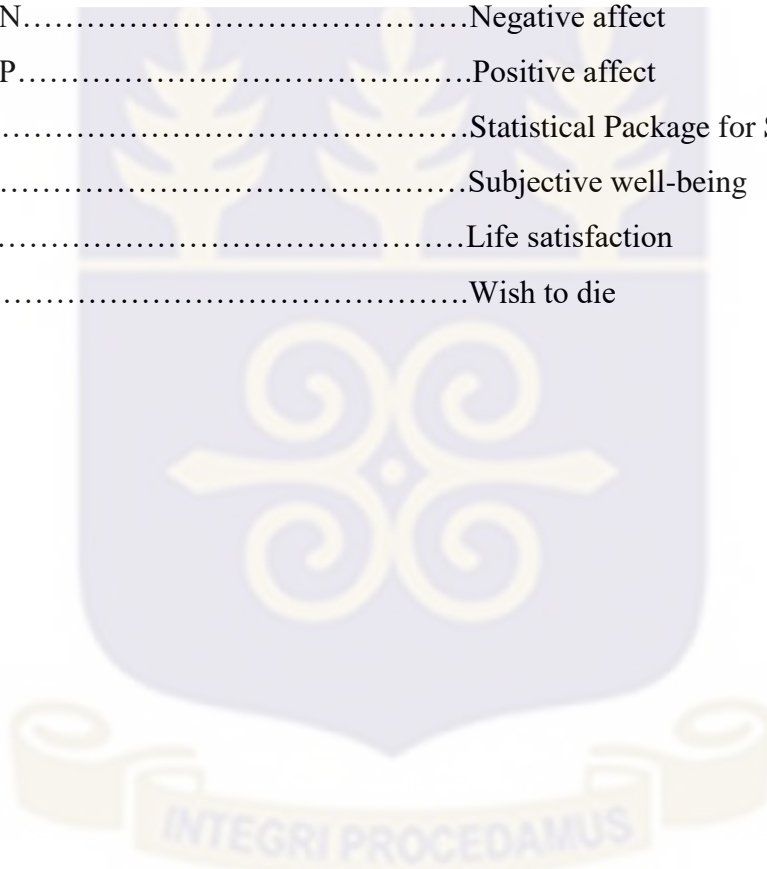
LIST OF FIGURES

Figure 1: Conceptual model.....	40
Figure 2: Observed model.....	80



LIST OF ABBREVIATIONS

1. LOT-R.....Optimism
2. MLQ-P.....Presence of meaning
3. MFRSS.....Religious support
4. PCA.....Principal Component Analysis
5. SEI-R-SS.....Spirituality
6. SPANE-N.....Negative affect
7. SPANE-P.....Positive affect
8. SPSS.....Statistical Package for Social Sciences
9. SWB.....Subjective well-being
10. SWL.....Life satisfaction
11. WTBD.....Wish to die



CHAPTER ONE

INTRODUCTION

Background of the study

Population Ageing in Ghana

Ghana like most parts of the world is experiencing population ageing, resulting mainly from decline in mortality and fertility rates (Mba, 2010). The proportion of people who are 60 years or older in Ghana has increased from 4.9% in 1960 to 7.2% in 2000 (Tawiah, 2011). The 2010 census saw a decline of the proportion to 6.5% (Ghana Statistical Service, 2013). The census data from 1960 to 2010 point to a youthful population in Ghana, a familiar situation on the African continent. However, in terms of the absolute numbers of older people in Ghana, the population has increased more than seven times, from 213, 477 in 1960 to 1.6 million in 2010 (Ghana Statistical Service, 2013). The population of older people has been projected to increase further, from 2.4 million in 2030 to almost double the figure in 2050 (United Nations, 2015).

The population of older people is composed of more females than males (Tawiah, 2011). The majority of older people in Ghana live in rural areas (Ghana Statistical Service, 2013). This stems in part from the effects of internal migration. Development and economic opportunities in major cities in urban areas attract people from rural areas (Mba, 2004). Young people in rural areas migrate to urban areas and return when they grow old for reasons including escaping the high cost of living in urban areas in their old age (Mba, 2010). Although population ageing points to developmental progress, it also presents economic, socio-cultural, health and psychological challenges on multiple levels, including the individual, family and society (Aboderin, 2004; Apt, 2012; Bloom et al., 2014; Mba, 2010).

Although remaining cautious of problematizing ageing, older people are more likely to suffer declines and losses over their life course. A large body of research links the ageing process to diseases and disease-related disabilities, cognitive and physical declines (Ayernor, 2012; Salthouse, 2012). In Ghana, the well-being of older people has captured the main concerns of debates and research (Aboderin, 2009). Research on the well-being of older people has focused on income and work, living arrangement, health and support status as indicators of well-being in late adulthood (Aboderin, 2004; Apt, 2001; Ayernor, 2012; Mba, 2004; van der Geest, 2002).

Research on income and work has revealed that a large proportion of the elderly remain in the labour force, with some joining the informal sector after retiring formal sector works (Ministry of Employment and Social Welfare, 2010). Generally, the majority of older people in Ghana have low or no formal education (Mba, 2010). Older females have less formal education compared to older males (Tawiah, 2011). Given the low literacy rate among the current group of older people, most of them work or worked in the informal sector, particularly in the agricultural area (Mba, 2010). For those involved in agriculture, physical decline impinge on their capacities to generate income from their agricultural activities such as farming and fishing (Ogwumike & Aboderin, 2005). The preponderance of older people who have worked in the informal sector implies that only a limited number of older people receive pension benefits (Adei, Anning, & Mireku, 2015; Ogwumike & Aboderin, 2005). Even among the pension beneficiaries, some complain about the inadequacy of their pension benefits (Adei, Anning, & Mireku, 2015).

Income generation is thwarted further by the discrimination of older people in the access of capital, literacy education and skill training (Apt, 2012). Poverty and ageing is particularly significant among women; inimical socio-cultural practices in the past and present such as giving low priority to their education, access and control of capital (including land), and witchcraft

accusations impinge on their economic empowerment (Adinkrah, 2004; Apt, 2012).

Subsequently, rural areas in Ghana are generally characterized by poverty and underdevelopment, reflected in poor nutrition, unavailability of potable water, poor and inadequate housing structures, low income levels, poor transport and communication facilities (Mba, 2004). This should not, however, suggest that urban areas are immune to poverty. There are a number of studies on urban poor populations in Ghana (see Awuah et al., 2014).

Financial difficulties in late life increase dependency on children, relatives and friends.

Traditionally, the family is responsible for providing care and material support for older people in Ghana. Adult children are expected to provide care and support for their parents in their old age, reciprocating the care and support given them in the early stages of their lives (van der Geest, 2002). However, anthropological, social work and sociological studies on intergenerational support have reported declines in support and care for older people in Ghana (Aboderin, 2004; Apt, 2001; van der Geest, 2002). Multiple reasons have been proffered to explain the decline in support for older people. They include modernization and change in family structure, economic constraints on the part of adult children, migration of adult children, and lastly, the past conduct of older people, that is, taking care of their adult children in the early stages of their lives (Aboderin, 2004, 2005; Apt, 2001; van der Geest, 2002, 2008). Despite the migration of adult children, the majority of older people live with someone as opposed to living alone (Mba, 2007).

With respect to the health status of the elderly, studies have found the prevalence of acute and chronic diseases, including arthritis, diabetes, hypertension and oral health problems (Ayernor, 2012). Chronic diseases have been recorded more in females and urban dwellers in Ghana

(Agyemang, 2006; Duda et al, 2011). The poor health status of some older people in Ghana accentuates their need for care.

Even though care burden is often on adult children and other relatives, it is not uncommon to find older people taking the responsibility of the care of their grandchildren. They, especially the grandmothers, have to contend with caring for grandchildren left behind by their adult children engaged in economic activities in other places (Oberhauser & Yeboah, 2011). Sexually transmitted infections such as HIV/AIDS have also placed extra burden on older people in the care of orphaned grandchildren left by their deceased adult children (Clark, 2006) or for their grandchildren and their sick adult children (Bassey, 2015). The situation depletes the already diminishing resources of older people.

Subjective Well-being

Subjective well-being is defined as the evaluations people make of their lives, both affectively and cognitively. There are four components of subjective well-being, namely positive affect, negative affect, life satisfaction and domain-specific satisfaction (Diener, Scollon, & Lucas, 2003). The affect components refer to experiences or reactions towards on-going events in the lives of individuals (Diener, 2000). Affective evaluations are concerned with emotions and moods. Previously, positive affect and negative affect were thought to be two polar opposites and that affective well-being was devoid of negative emotions. Bradburn and Caplovitz (1965) asserted that the affective components were two separable factors as opposed to the previous view of the affect components as polar opposites. Diener (2000) as a result recommended that the dimensions be measured separately instead of combining them.

Life satisfaction is a global cognitive evaluation of how satisfying one's life is. Research has shown that when making life satisfaction judgments people do not evaluate every aspect of their

lives and then weight them. Instead, people rely on a variety of shortcuts in their life satisfaction judgments (Schwarz & Strack, 1999). Salient information at the time of evaluation is more likely to be used (Schwarz & Strack, 1999). The current mood of an individual can influence life satisfaction judgment. Current mood or affect is less influential in life satisfaction judgments in interdependent cultures than independent cultures (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002).

Unlike global life satisfaction, domain satisfaction restricts satisfaction judgments to specific aspects of the lives of individuals. For example, researchers interested in the well-being of workers may assess their job satisfaction. Domain-specific satisfaction will not be assessed in the current study because the importance attached to any domain of life varies from one individual to another. Diener, Lucas, Oishi and Suh (2002), for instance, found that happy people tend to give more weight to the best domains in their lives whereas unhappy people tend to give more weight to the worst domains in their lives. Therefore, assessing a specific domain or two may not be a full reflection of satisfaction in life. For example, in a population that is especially prone to experiencing social losses, assessing marital satisfaction, for example, will be unfair and undemocratic. In contrast, global life satisfaction gives older people the opportunity to evaluate their lives based on what is important to them.

As mentioned before current mood or affect influences life satisfaction judgments. This therefore raises questions about the stability of the construct. However, studies have shown that the components of subjective well-being exhibit some degree of stability over longer periods (e.g. Galinha & Pais-Ribeiro, 2008; Lucas & Donnellan, 2007). For example, Lucas and Donnellan (2007) observed reliability of .67 for life satisfaction scores over 7 years. Galinha and Pais-

Ribeiro (2008) found that positive affect and negative affect had variance temporal stability with correlation of .62 and .30 respectively in a two-month interval.

Generally, culture influences subjective well-being. The value cultures place on subjective well-being influences its ratings by individuals. In independent cultures where individual feelings, thoughts and agency are emphasized, subjective well-being is more likely to be rated highly than in interdependent cultures where what others think and how others feel is prominent (Diener, 2000). Subsequently, identity consistency which refers to maintenance of a consistent self-view over various situations does not appear important in predicting subjective well-being in interdependent cultures like Korea (Suh, 2002). However, in independent cultures like the US it is strong predictor of subjective well-being (Suh, 2002).

Although there have been some interest in the national patterns of subjective well-being, rural-urban comparisons have not received much attention (Raquena, 2016), particularly among older people. This area is fraught with controversies. On the one hand, some have argued that rural residence fosters subjective well-being because of the excesses of urban life, including noise pollution and other unsavory factors (Fisher, 1975). This is characteristic of developed countries where there is an increasing preference for rural residence (Berry & Okulicz-Kozaryn, 2009). On the other hand, urban residence is preferable and fosters subjective well-being in developing countries where the conditions of living vary markedly between urban and rural areas (Easterlin, Angelescu, & Zweig, 2011).

Wish to die

The experience of age-related losses provokes existential questions which includes whether older people wish to die or not. For example, older people in Kwahu, Ghana expressed the wish to die in their narratives for reasons including poor health and the feeling of being a burden to the

family (van der Geest, 2001). Depression is also commonly associated with the wish to die. However, there are others who have the wish to die without any reported depressive symptoms (Rurup et al., 2011). Other factors associated with the wish to die include financial problems, health problems, meaninglessness, and being widowed (Chochinov et al., 2005; Lapierre et al., 2015; Rurup et al., 2011).

There is a growing interest in understanding the factors associated with the wish to die (e.g. Lapierre et al., 2012; van Wijngaarden, Leget, & Goossensn, 2014). One of the reasons for the interest is that the wish to die may provide opportunities to make early detection and intervention, efforts aimed at curbing suicide (Lapierre et al., 2015).

Spirituality and Well-being

Until the 1990s, little attention had been paid to spirituality and religion by gerontologists in spite of their importance in the lives of many older people (Atchley, 2005). Moreover, spirituality was not considered an appropriate concept for scientific inquiry (Moberg, 2008a). This was partly because of the notion that spirituality dealt with aspects of human life that eluded measurement by conventional scientific methods (Atchley, 2000).

The earliest studies were under the label of religion and religiosity, principally assessed through membership and participation in organized structures, beliefs and activities (e.g. Chatters & Taylor, 1989). The recent decades have seen a growing interest in the concept of spirituality (Moberg, 2008b). This has resulted in the evolved meanings of religion and spirituality (Pargament, 1999). Previously, both concepts were subsumed under the umbrella term “religion” (Moberg, 2008b). Although some scholars have preferred to use the terms interchangeably, others have defined spirituality in contrast with religion (Pargament, 1999). The later has

resulted in the polarization of the two terms: spirituality as personal and good, religion as institutional and bad (Hill & Pargament, 2003).

Hill et al. (2000) and Pargament (1999) have cautioned against seeing the two concepts in this manner. First, conceptualizing religion as institutional and spirituality as personal ignores the fact that every major religious institution is concerned with spiritual matters- bringing individuals close to God or a higher power (Pargament, 1999). Second, viewing religion and spirituality in the simplistic terms of good and bad overlooks the potential positive and negative impacts of both religion and spirituality (Hill & Pargament, 2003). Third, and perhaps most importantly, the concepts overlap to the extent that most people who experience spirituality within the context of religion fail to make distinction between the two concepts (Zinnbauer et al., 1997).

It must be emphasized that even though the relationship between religion and spirituality is complex and overlapping, the concepts are not the same (Hill & Pargament, 2003). A considerable number of people find their voices with respect to spirituality in the context of their religion (Atchley, 2008). One study found that African-American older adults were more likely to connect spirituality with religion than their European-American counterparts who tended to separate religion and spirituality (Nelson-Becker, 2003).

Although defining the two concepts remains debatable, King, Speck and Thomas' (2001) conceptualization of spirituality is instructive. Spirituality is defined as:

...a person's belief in a power apart from their own existence. It is the sense of relationship or connection with a power or force in the universe that transcends the present context of reality. It is more than a search for meaning or a sense of unity with

others. Some people use the word of God, others may be less specific (King, Speck, & Thomas, 2001, p. 1015–1016).

Empirical studies on religion and spirituality throughout history in gerontology have focused chiefly on health and well-being (Levin & Chatters, 2008). Spirituality and religion are important resources in late life that predict health and well-being (Moberg, 2008a). Researchers of religion, spirituality and ageing have done an impressive job of providing data linking religion and spirituality to health and well-being. Strong associations have been found between spirituality and psychological well-being, life satisfaction, and positive affect (Hilton & Child, 2014; Marquine et al., 2015). In addition, spirituality is associated with low incidence of suicide ideation (West, Davis, Thompson, & Kaslow, 2011), physical health (e.g. Koenig, 2001) and lower levels of mortality (e.g. Lucchetti, Luchetti & Koenig, 2011).

The discourse on the salutary effects of spirituality has gone beyond finding significant associations among spirituality, health and well-being (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). There is a growing interest in understanding why and how religiousness/spirituality contributes to well-being (e.g. Steger & Frazier, 2005; Yoon et al., 2015).

Meaning in life has been proffered as a possible mechanism underlying the relationship between spirituality and mental health (Steger & Frazier, 2005). It has two dimensions which are the presence of meaning and search for meaning. The presence of meaning is experienced when people comprehend themselves, the world and how they fit in the world, and have purpose in their lives (Steger, Kashdan, Sullivan, & Lorentz, 2008). The search for meaning is defined as the extent of individual's desire and efforts to establish and/or augment the purpose and meaning in their lives (Steger et al., 2008). The presence of meaning in life is a state whereas the search for meaning is a process (Wong, 2016).

There are reasons to think that the presence of meaning will mediate the relationship between spirituality and well-being. The fundamental concern of religion/spirituality is the quest for ultimate values and meaning (Funder, 2002; Pargament, 1999). Religion/spirituality is an important source of global meaning for many (Park, 2013; Steger & Frazier, 2005), including older people who may have some of their sources of meaning diminishing (Koenig, 2006).

Global meaning is thought as encompassing dimensions of order and purpose (Park & Folkman, 1997). With regards to order, religion/spirituality influences people's beliefs about themselves, the world and how they fit in the world. For example, religion/spirituality influences the self-esteem or personal significance of individuals through, say, the feeling of being chosen by God (Pargament, 1997). Spirituality influences purpose by directing individuals' strivings. More precisely, spirituality is the search for the sacred; it is aimed at discovering the sacred, maintaining it, and transforming it in life, if necessary (Pargament, 1999). The sacred commonly refers to God but may include special objects that have been sanctified via their associations with or representation of the sacred (Pargament, 1999).

Research shows that the presence of meaning predicts health and well-being in late life (Krause & Hayward, 2012; Steger, Oishi, & Kashdan, 2009). The presence of meaning is associated with the components of subjective well-being (e.g. Battersby & Phillips, 2016; Steger, Oishi, & Kashdan, 2009). In addition, the presence of meaning is associated with low incidence of the wish to die (Morita et al., 2004), physical health and lower mortality risk (Krause 2009; Krause & Hayward, 2012).

Aside the empirical support for the beneficial effects of meaning in life, Erikson's (1977) psychosocial development theory provides some explanation for why meaning in life is associated with well-being in late life. Meaning and order are pronounced in the eighth stage of

Erikson's theory, labelled "integrity versus despair". Older people at this stage review their past lives and accomplishments in order to make sense of their lives. Ego integrity is attained when the individual accepts himself or herself for the good and bad aspects of life, and prepares to face death with no fears. On the contrary, older people whose lives are bereft of meaning slip into despair, manifested in the feeling that it is too late to start life all over again (Erikson, 1977).

Optimism is another variable which has been proposed as a mediator for the relationship (e.g. Salsman, Brown, Bretching, & Carlson, 2005), albeit receiving less attention from researchers. Optimism, conceptually close to hope, refers to the extent to which individuals possess generalized expectations that they will obtain favourable outcomes in life (Carver, Scheier, & Segerstrom, 2010). Religion/spirituality fosters optimism and hope (Yendork & Somhlaba, 2016). Peterson (2000) has argued that religion fosters optimism because of its promise of certainty. Levin and Chatters (1998) have also asserted that religion/spirituality may influence mental health by generating optimistic and hopeful expectations that, for example, rewards of better health and well-being awaits those who are devoted to God.

Optimism has consistently been associated with subjective well-being (Carver, Scheier, & Segerstrom, 2010). High optimism has been linked with reasons for living and lower suicidal ideation (e.g. Tucker et al., 2013; West, Davis, Thompson, & Kaslow, 2011). Studies that have focused on exclusively older samples have also found the beneficial effects of optimism on well-being (e.g. Ferguson & Godwin, 2010; Ju, Shin, Kim, Hyun, & Park, 2013). However, the results from a study conducted by Lennings (2000) offers a slightly different position on optimism and well-being in old age. Although optimism increased with age it became a less important predictor of life satisfaction for the oldest-old, not for the young-old.

Religious support and Well-being

One of the pathways suggested for the relationship between religious/spiritual involvement and mental health is social relationships in religious communities (Levin & Chatters, 1998).

Religious people tend to receive social support from their congregations (Krause, Ellison, & Wulff, 1998) and are also likely to appraise their congregations positively, as sources of comfort and reassurance (Pargament, Koenig, Tarakeshwar, & Hahn, 2004).

Religious support has not been fully studied in social gerontology (Krause, 2002). For instance, some of the studies that have examined religious support and well-being have been based on samples of individuals across various age groups (e.g. Hovey, Hurtado, Morales, & Seligman, 2014; Krause et al., 2001). This limits generalization to older populations (Krause, 2002). That being said, there have been some significant gains made in religious support research. For instance, researchers have attempted to understand how various dimensions of religious support impact mental health. Specifically, studies have focused on how frequency of interaction (e.g. Chatters, Taylor, Lincoln, Nguyen & Joe, 2011), emotional support (e.g. Chatters et al., 2011; Krause, Ellison, & Wulff, 1998), negative interaction (e.g. Nooney & Woodrum, 2002) and spiritual support (e.g. Krause et al., 2001) relate to mental health outcomes.

The question about why religious support is connected to well-being has not received much attention (Krause, 2002). Religious support may influence well-being through meaning in life.

The perception or receipt of religious support may elicit or maintain the feeling of significance in life. Research on social support in religious and secular contexts provide support for this assertion. Krause (2007, 2008) found that among older people anticipated secular social support and church-based social support were associated with the presence of meaning over time. The

presence of meaning, as mentioned already, is also associated with well-being. Therefore, meaning in life is a plausible mediator between religious support and well-being.

Another plausible mechanism for the relationship between religious support and well-being is optimism. Generally, the literature on the link among secular social support, optimism, and well-being has been focused on social support as a mediator between optimism and well-being (Karademas, 2006). Using Cervone's (2004) cognitive architecture of personality model which is based on knowledge structures and appraisal processes, Karademas (2006) reasoned that perceived social support represents knowledge about the self and world and that may in turn lead to appraising the future as good, and subsequently lead to better health outcomes. Support from the clergy and congregants may also bolster optimistic outlook in life that things will become better. This may be particularly important for individuals experiencing stressful events (e.g. West et al., 2011).

Problem Statement

Generally, there is a paucity of research on ageing in Ghana (Anum & de-Graft-Aikins, 2014). The literature on population ageing in Ghana has presented a problematized view of ageing. Financial difficulties, health problems and the decline in family support for older people are some of the problems the studies on ageing in Ghana have revealed (Aboderin, 2004; Apt, 2001; Ayernor, 2012; Mba, 2004; van der Geest, 2002). Spirituality and religious support can serve as important personal and social resources in the face of the challenges found in the Ghanaian ageing literature. These variables have, however, been missing in ageing research in Ghana.

On the global level, there are a number of issues to be explored with respect to how spirituality and religious support are linked to well-being. Generally, much attention has been paid to meaning as a mediator in the relationship between spirituality and well-being (e.g. Yoon et al.,

2015). However, studies assessing meaning in life as a mediator have focused more on younger people than older people (e.g. Khumalo, Wissing, & Schutte, 2014). Subsequently, optimism has been largely overlooked as a possible mediator. Religion, as Peterson (2000) argued “lends itself particularly well to big optimism because of its certainty” (p. 51). Therefore, it will be important to examine the possible mediating role of optimism. The mechanism underlying the link between religious support and well-being has also been less explored (Krause, 2002).

Studies that have investigated well-being have generally done so in either rural or urban sample (e.g. Yoon, 2006; Lee, 2007). There are a few studies that have focused on rural-urban comparison of well-being (e.g. Easterlin, Angelescu, & Zweig, 2011). Rural-urban comparison on well-being among exclusively older samples is lacking in the literature. The pattern of well-being among rural-urban residents may not hold same for older people. Late adulthood may add some dynamics to rural-urban comparisons. For example, in Ghana a considerable number of young people migrate to urban areas and then return when they are old for reasons including escaping the high cost of living in urban areas (Mba, 2010). Therefore, even though the conditions of living may be poor in rural areas, decline in productivity and income generation may make rural-residence more favourable and beneficial to their well-being.

The wish to die is a research area in its infancy (van Wijngaarden, Leget, & Goossensn, 2014) and understanding the factors that contribute to this desire is a step towards ensuring well-being and reducing suicide in late adulthood (Lapierre et al., 2015). With the exception of a few studies (e.g. van der Geest, 2001), ageing research in Ghana has contributed a little to the discourse. The current study therefore attempts to address the issues raised thus far.

Aims and Objectives of the Study

The aim of the current study is to compare subjective well-being and the wish to die in rural and urban Ghana as well as examine the underlying mechanisms for the associations among spirituality, religious support and well-being.

The specific objectives of the study are as follows:

1. To ascertain differences in well-being indicators (subjective well-being and the wish to die) between older people in rural and urban Ghana.
2. To investigate the mediating role of the presence of meaning in the relationship between spirituality and the well-being indicators.
3. To examine the mediating role of optimism in the relationship between spirituality and the well-being indicators.
4. To assess the mediating role of the presence of meaning in the relationship between religious support and the well-being indicators.
5. To explore the mediating role of optimism in the relationship between religious support and the well-being indicators.

Significance of the Study

The current study is significant in the following ways. First, the study will make theoretical contribution. Other studies have not attempted to use or integrate the four theories used in this study, precisely religious coping theory (Pargament, 1997), meaning-making model (Park & Folkman, 1997), psychosocial development (Erikson, 1977) and attachment theory (Kirkpatrick, 1992), to explain the roles of spirituality and religious support in the well-being of older people. The findings about the influence of religious support and spirituality on well-being will also

provide insight into why it may be important to involve faith communities in efforts aimed at improving the well-being of older people. The Ghana ageing policy (Ministry of Employment and Social Welfare, 2010) is silent about the role of faith communities in assisting with the challenges presented by population ageing.

Subsequently, the findings of the study may be useful to health practitioners by providing a basis for which they can utilize spiritual beliefs as resources to help maintain and improve the well-being of older people. Insights gained from understanding the mechanisms through which spirituality operate to influence well-being may inform how spiritual beliefs can be utilized to maintain and improve well-being among older people. It will also provide a basis for why it may be important for health practitioners to collaborate with religious leaders.

Moreover, understanding how religious support contributes to well-being may inform faith communities on how they can help to improve the well-being of the elderly. Finally, the findings in the study also have implications for suicide prevention. The wish to die is the beginning stage of the suicide process and the findings with regards to how the variables of interest in the study relate to the wish to die may provide insights into why it may be important to promote the variables in efforts to reduce suicide.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The current chapter focuses on theories that guided the research objectives and hypotheses. It will also present the review of related studies, rationale for the study, conceptual framework as well as the formulated hypotheses of the study. Operational definitions of key concepts will also be highlighted.

Theoretical Framework

This study is aimed at investigating the underlying mechanisms for the salutary effects of spirituality and religious support on well-being. Theories on how the variables of interest influence well-being are presented in this section. First, Pargament's (1997) religious coping theory is presented, followed by the meaning making model by Park and Folkman (1997). Erikson's (1977) psychosocial theory of development and Kirkpatrick's (1992) extension of the attachment theory are subsequently presented.

Religious coping theory

The religious coping theory offers a comprehensive way of understanding the connection between religion and mental health. Pargament (1997) defined religious coping as a process through which people attempt to understand and deal with significant stressors in their lives in ways related to the sacred. The sacred most often includes concepts of God, divinity, the transcendent, but may also include objects or qualities that have been sanctified by virtue of their association with or representation of holiness like marriage (Pargament, 1999). It is also

noteworthy to recognize that Pargament (1999) views religion as a broadband construct, one that subsumes spirituality.

The effects of religious coping on health outcomes are shaped by the forms of religious coping used by individuals (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). Pargament and his colleagues (1998) identified two types of religious coping: positive and negative religious coping. Positive religious coping, as its name suggests, yields helpful or beneficial health and well-being outcomes. Positive religious coping is often an expression of spirituality and a secure relationship with God (Pargament et al., 1998). Religious support or seeking support from the clergy or congregation members is another form of positive coping. Negative religious coping on the other hand is harmful to the health and well-being of individuals and generally an expression of less secure connection with God as well as a struggle in the search for meaning.

Religious coping is multidimensional. Hence, individuals are more likely to use more than one forms of religious coping (Pargament et al., 1998). Generally, individuals tend to use positive forms of religious coping than negative ones (Pargament et al., 1998). Additionally, studies on religious coping show that individuals are more likely to view God and their congregations in a positive fashion, as sources of love and support as opposed to viewing God and their congregations as sources of pain and punishment (Bearon & Koenig, 1990; Pargament, Koenig, Tarakeshwar, & Hahn, 2004)

Besides the theory being useful in explaining the direct link between two forms of religious coping (spirituality and religious support) and well-being, the theory also helps to explain how spirituality and religious support influence well-being. Pargament, Feuille, and Burdzy (2011) noted that various forms of religious coping may serve several functions. One of the major functions of various forms of religious coping is providing meaning and purpose (Pargament,

Koenig, & Perez, 2000). Religious coping methods offer a variety of meaningful explanations for events in life. The way events are appraised impact on the well-being of individuals (Pargament, Koenig, & Perez, 2000). Subsequently, religious coping methods influence goals or purpose. Religious coping may influence the search for connection with God or a higher power, and spiritual connection with other people (Pargament, Koenig, & Perez, 2000).

Religious coping methods are also sources of optimism and hope in stressful situations (Kahoe, as cited in Pargament et al., 1990). Religion as Freud (1928) argued is more amenable to optimism than science because it offers certainty while science offers probabilities. Religious coping methods foster optimistic outlook through, for example, the appraisal of situations as part of God's plan or seeing how situations could be beneficial in spiritual terms (Pargament, Feuille, & Burdzy, 2011).

In summary, the religious coping theory is a comprehensive theory which helps to explain the direct and indirect links among spirituality, religious support and well-being. With regards to the indirect effects of the religious coping methods, meaning in life and optimism are possible mechanism for explaining the direct connections between the forms of religious coping and well-being.

Meaning-making model

Park and Folkman's (1997) meaning making model provides further elaboration on the meaning function of spirituality. Even though the meaning-making model is not predominantly about religion or spirituality, religion/spirituality plays an important role in the model (e.g. Park, 2005; Park, 2013).

The model identifies two dimensions of meaning and they are global and situational meaning.

The global meaning dimension is seen as orienting systems of individuals which influence how they view many situations in their lives (Park, 2013). It is generally thought of as encompassing two dimensions that include order and purpose (Park & Folkman, 1997). Situational meaning refers to the meaning made in a specific instance or situation. The meaning made is a product of the interaction between global meaning and the situation (Park, 2013). The meaning made has direct and indirect effects on health outcomes, which includes quality of life and mortality (Park, 2013).

Global meaning is of utmost importance in this study because of its focus on general sense of meaning and not event-related meaning which is a core part of situational meaning. Spirituality informs global meaning (Park, 2013). As mentioned earlier, global meaning has two dimensions of people's beliefs about order and purpose. Beliefs about order can be categorized into beliefs about one's self, beliefs about the world and beliefs about the relationship between the self and the world (Park & Folkman, 1997).

Of particular relevance to this research is the category concerning beliefs about one's self.

Generally, the concept of self-worth is discussed in relation to global meaning (Park & Folkman, 1997). Self-worth basically addresses questions about the value or significance of an individual. Religion/spirituality is an integral part of individuals' identities. This can be seen in how people comprehend themselves as spiritual beings (Pargament, 1997) as well as their identification with religious communities or groups (Ysseldyk, Matheson, & Anisman, 2010). Religious identity as Park and Edmonson (2011) argued can be a viable source of self-worth for people.

Purpose, the other dimension of global meaning, refers to beliefs that direct people's striving in this world (Park & Folkman, 1997). Purpose is usually framed in terms of goals (Park &

Folkman, 1997). Religion/spirituality appears to be a key part of the life purposes of individuals by directing their strivings (Park & Edmondson, 2011). For example, religion influences global goals- goals that people consider as most important in their lives. For example, religious goals may include seeking connection with God (Pargament, Koenig, & Perez, 2000).

One of the attributes of global meaning is stability. Basically, the need for stability and coherence in conceptual systems leads to the tendency to accommodate new information into preexisting belief system rather than modify or assimilate the new information into their belief systems (Park & Folkman, 1997). Global meaning or beliefs are also personally relevant and not some abstract or theoretical concept (Park & Folkman, 1997). For example, beliefs about the world in terms of just-world beliefs are in reference to the likelihood of events happening to individuals.

In summary, the meaning making model provides a useful framework for understanding the dynamic relationships among spirituality, meaning and mental health. Global meaning is an enduring belief system that orients individuals and it is significant in how people deal with stressful events in their lives. Spirituality informs the global meaning dimensions of beliefs about the self (significance) and purpose.

Erikson's Theory of Psychosocial Development

Erikson's (1977) theory of psychosocial development offers a framework for understanding the impact of meaning on the well-being of older people. Erik Erikson, just like Carl Jung, broke away from the psychoanalytic tradition of viewing personality development as ending at adolescence (Cavanaugh, 1996). Instead, Erikson's theory emphasized a lifelong process of development which includes development in late adulthood. Erikson postulated eight stages of development. Each stage has its own developmental task, what Erikson refers to as crisis

(Cavanaugh & Blanchard-Fields, 2011). The developmental task or crisis is marked by the struggle between two opposing tendencies.

With regards to the relevance of the theory to the current research, the final stage of integrity versus despair is of utmost importance because of its emphasis on meaning and order in late adulthood (Erikson, 1977). The stage is reached by only few people, those who have successfully resolved the developmental tasks in the preceding stages (Erikson, 1977). Older people at this stage are faced with the developmental task of reviewing their past lives, an effort aimed at obtaining a sense meaning and integrity in life.

Successful resolution of this task results in the feeling of satisfaction with one's life, where the individual accepts the good and bad aspects of life and anticipates death with no fears. These individuals are well-adjusted even though they may have their regrets (Erikson, Erikson, & Kivnick, 1986). On the contrary, individuals who fail to resolve the developmental task successfully have their lives riddled with despair, manifested in the feeling that time is too short to start another life and try another route to achieving integrity (Erikson, 1977). It is also common for such individuals to have their lives suffused with the fear of death (Erikson, 1977).

Attachment theory

The attachment theory provides elaboration on the connection between spirituality and optimism. It was originally propounded by Bowlby (1969) who postulated that infants possess a biosocial behavioural system which helps them to forge closeness with their primary caregiver and thereby ensuring protection against danger. An optimally functioning system leads to the development of a secure attachment with the primary caregiver, usually the mother. Infants with the sense of secure attachment relationship are able to confidently explore their environment and seek comfort in the presence of threat. The mother serves as a secure base and a haven of safety.

Kirkpatrick (1992) extended the central thesis of the theory to the psychology of religion. He argued that the idea that an attachment figure serves as a secure base and a haven of safety is a fundamental aspect of many theistic religions, including Christianity (Kirkpatrick, 1992). The attachment figure may be God, Jesus Christ, angels or other beings that transcend the present context (Kirkpatrick, 1992). God, for example, is seen by believers as always available and without limits, qualities reflected in the attributes of omnipresence and omnipotence (Kirkpatrick, 1992). The religious person approaches life with faith that God, for example, will be available to provide protection and comfort in distress times (Kirkpatrick, 2012).

Additionally, the sense of the presence of God allows the religious person to approach challenges of life with confidence (Kirkpatrick, 1992). God is a potent source of hope and optimism in these times as well as in the future (Sim & Loh, 2003).

In summary, the theory provides a framework for understanding the relationship between spirituality and optimism. Those who forge a close relationship with God or a higher power perceive their attachment figure as a haven of safety they can fall on in distress times.

Subsequently, God provides a secure base for believers to explore their environment with confidence. The perception that there is a God who loves and cares for individuals therefore promotes optimism even in the face of life's challenges.

The theories presented thus far provide frameworks for understanding the salutary effects of spirituality and religious support. Precisely, the religious coping theory postulates that positive patterns of coping which includes spirituality and religious support yield beneficial mental health outcomes. Subsequently, the theory postulates that spirituality and religious support serve several functions which may include providing meaning and optimism. The meaning making model expanded the assumption about the meaning function of spirituality. Kirkpatrick's (1992)

extension of the attachment theory also provided further elaboration on the link between spirituality and optimism. Finally, Erikson's psychosocial theory of development connects meaning to well-being in late adulthood.

Review of related studies

This section of the thesis focuses on a broad range of issues related to well-being. Studies about how well-being may differ in rural and urban populations have been reviewed. Additionally, the assumptions that emerged from discussing the theories guided a large aspect of the review of studies. Precisely, studies on how spirituality and religious support are connected to well-being have been reviewed.

Rural-Urban Comparison on Well-being

Studies on well-being have neglected rural-urban comparisons (Raquena, 2016). Instead, they have focused on examining factors associated with well-being in either rural or urban samples, but not both (e.g. Yoon, 2006). Studies that did the rural-urban comparisons have often focused on individuals across different age groups, instead of exclusively older adult samples.

The issue of the subjective well-being of residents of rural and urban settings is one fraught with controversies. Fischer (1975) argued that the excesses of urban life, including pollution and other unsavory factors erode the subjective well-being of individuals in urban settings. This assertion is partly the case, at least for those in developed countries where occupation, income and education in rural and urban areas converge or are converging (Easterlin, Angelescu, & Zweig, 2011). Berry and Okulicz-Kozaryn (2009) used data from the World Values Survey for the period of 1995-2004 to examine this issue. The data was from 60 countries. Berry and Okulicz-Kozaryn did not find any significant rural-urban difference in life satisfaction on the global level. However, when the data was grouped into high income countries (those with per capita Gross

Domestic Product (GDP) above \$10,000) and low income countries (those with per capita GDP less than \$10,000), some rural-urban differences were found. High income countries included countries such as Germany, Sweden and the US whereas low income countries included countries such as Belarus, Nigeria and Turkey. Greater satisfaction in life was associated with rural residence in high income countries. The effect was significant in countries with Anglo-Saxon heritage, but not in countries with Latin heritage. For the low income countries, there was no significant rural-urban difference in the life satisfaction of residents. The researchers also reported that level of development was a significant source of subjective well-being in high income but not low income countries. When five groups, including Africa, Latin America, the former Soviet bloc, Islam and Asia were analyzed separately it was found that life satisfaction increased with urban residence in Asia only. Additionally, there was a significant relationship between per capita GDP and life satisfaction in Asia and Africa. In contrast, personal income failed to significantly predict life satisfaction in either Asia or Africa.

The results from Easterlin, Angelescu, and Zweig's (2011) study which compared life satisfaction across-country and within-country differed from Berry and Okulicz-Kozaryn's (2009) in two main ways. First, urban residence was linked with greater life satisfaction for those in low developed countries (less than \$23,000 per capita GDP). The association was not in Asia alone but in Africa and Latin America. Second, GDP was not associated with life satisfaction in low developed countries. Instead, income, education and occupation largely accounted for the rural-urban differences in life satisfaction within low developed countries. Other significant predictors were marital status, age and gender. The point of convergence in the two studies was in the conclusion that rural residence favours those in developed countries. Easterlin, Angelescu,

and Zweig used data from the Gallup World Poll for the period 2005-2008. The analysis was based on 80 countries.

Raquena's (2016) findings were similar to those found in Easterlin, Angelescu and Zweig (2011). Using data from the sixth European Social Survey (ESS) which was composed of 29 countries, Raquena categorized the countries into two groups based on whether the per capita GDP was less or above \$20,000. Developed countries which included countries such as Norway, the Netherlands, Germany and Sweden had per capita GDP above the standard. Less developed countries with per capita GDP below the standard included countries such as Russia, Ukraine, Kosovo and Bulgaria. Raquena found that level of happiness was on the average 16.5% higher in developed countries than less developed countries. The study examined the influence of rural-urban residence in addition to "big seven" factors as predictors of happiness. The big seven factors included income, family relationships, community relations, employment, health, personal freedom and personal values (e.g. religion). Raquena found that the big seven factors, with the exception of stable employment explained 23.2% of variance in happiness for the developed countries. When the rural-urban factor was added, there was only a significant increase of 0.3% in the variance explained. Residence in other places, including countryside and suburbs of large cities, had stronger association with subjective well-being than residence in large cities. In less developed countries, the big seven factors explained 19.5% of the variance in subjective well-being. When the rural-urban factor was added an additional variance of 0.8% was explained, more than what it did in developed countries. Higher level of subjective well-being was associated with living in large cities than living in the countryside and suburbs of large cities.

McLaren and Hopes (2002) conducted a study examining rural-urban differences in reasons for living under the backdrop of increased rural suicides in Australia. The study was composed of a community sample of 3000 residents, 750 each from four strata: urban (capital city), regional cities, regional town and rural. Contrary to what was expected, rural residents scored significantly higher on reasons for living than residents of the other strata. The difference as the researchers found was not the location per se. Instead, the rural residents had more survival and coping beliefs, concerns about the repercussion of suicide on their family and children as well as the societal repercussion of suicide. The rural residents had more moral objections to suicide than the other groups.

The differences reported in well-being with regards to rural-urban residence have not been found in other studies. Valente and Berry (2016) used data from the World Values Survey for the period 2010-2014 and found no significant difference in the levels of happiness between residents of rural and urban Latin America. Initially, it appeared that those in rural residents were happier but when additional individual controls relating to God, friends and family were added the difference was no longer significant. Valente and Berry explained that when collectivism dominates individualistic values, the family, close friends and God rather than personal achievements and place of residence, become significant determinants of the subjective well-being for individuals in Latin America- unlike in countries with Anglo-Saxon heritage.

In summary, studies that have investigated the differences in well-being between rural and urban residents have focused mostly on individuals across different age groups. There has been limited focus on older people. In today's world of population ageing, it may be important to understand how well-being may differ in rural and urban areas. In spite of the apparent lack of literature focusing on only older samples, the existing literature on rural-urban comparison on well-being

shows a pattern that well-being may differ according to a country's level of economic development. Rural residence favours individuals in developed countries compared to less developed ones. The reverse is the case for individuals in urban settings in less developed countries where the conditions of living are better than rural settings.

Religious Support and Well-being

Studies that have assessed that impact of religious support on well-being have generally found affirmative results that religious support is positively associated with well-being. However, a few studies have found statistically non-significant associations between religious support and well-being indicators (e.g. Lee, 2011). Some of the studies that have examined religious support (e.g. Lee, 2007; Lee, 2011; Roh, Lee, & Yoon, 2013) have used the Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS) which is a collection of short items which may limit the revelation of fine-tuned outcomes (Ciarrocchi, Dy-Liacco, & Deneke, 2008). Religious support is assessed with four items, two assessing positive support and the other two assessing frequency of criticism or demands. Additionally, a large share of the literature on religious support has come from non-African settings. There is limited amount of information on the influence of religious support on well-being with African samples.

Roh, Lee, and Yoon (2013), for example, examined the influence of support from congregation on the general well-being of 177 older Korean immigrants in the US aged 65 years or older. Religious support was examined together with other facets of religious/spiritual coping. Secular social support was also examined. The results revealed that religious support was positively related to general well-being. In addition, with the exception of depression, religious support predicted the dimensions of general well-being: positive well-being, general health, vitality, self-

control, and anxiety. Social support was a significant predictor of general well-being and all its dimensions.

Similar findings were reported in a study conducted by Lee (2007). Lee used a sample of 145 Asian Americans (76 Chinese Americans, 69 Korean Americans) aged between 60 and 95 years. The majority of participants reported that they relied on their religious community for support. Like Roh, Lee, and Yoon's (2013) study religious support was assessed together with other facets of religious/spiritual coping, and secular social support. There was a negative relationship between religious support and depression after the effects of socio-demographic variables were accounted. Religious support was also associated with life satisfaction. However, for self-efficacy, religious support was not a significant predictor. Social support was not significantly associated with any of the well-being indicators in the study.

In some studies that have accounted for the effects of the health of older people, religious support has emerged as a significant predictor of well-being. Litwin and Shiovitz-Ezra (2010) investigated the influence of different social network types on the subjective well-being of a national sample of 1462 older Americans. Using logistic regression, the researchers found that respondents with one or more functional health disabilities were less happy, anxious and lonelier than those who had no functional disability. After controlling for the effects of demographic variables and health, the study results revealed that members of congregant network were happier and less likely to feel anxious than those who were not members of a congregant network. The researchers also stated that the results they found with the logistic regression were almost the same when they performed linear regression. The limitation of this study, however, lies in its use of a single-item measure of happiness. It is quite understanding considering that the researchers used a very large sample size of 1462.

Religious support has also been linked with less suicide ideations and behaviours. Chatters et al. (2011) also used a very large sample size of 4126 Blacks (2870 African American, 1256 Black Caribbean) across various age groups to examine the influence of church-based social support on suicide ideation and behaviour. There were 938 participants who were 55 years and older in the study. Church-based social support had five dimensions: subjective closeness to church members, frequency of interaction with church members, receipt of emotional support and frequency of negative interactions with church members. Of the five dimensions, only subjective closeness was significantly associated with suicidal ideation. Those who felt close to their church members were less likely to report suicidal ideation than those who indicated that they did not feel close to their church members. Additionally, all but the frequency of interaction with church members was significantly associated with suicide attempts. Frequency of interaction with church members was positively associated with suicide attempts, indicating that those who had interacted often with their church members were more likely to report attempting suicide than those who reported less frequent interactions with their church members.

The results from a study conducted by Lee (2011), however, failed to support the beneficial effects of religious support on well-being. Lee found no significant association between religious support and general well-being or any of its dimensions. The study was based on a sample of 143 older adults in Kansas who were at least 65 years old. Instead, financial support and social support were associated with some of the dimensions of general well-being.

Possible mediating roles of Optimism and Meaning in life

Many of the studies on religious support have focused on its direct effect on well-being. There has been limited focus on exploring the underlying mechanism for the beneficial effects of religious support. Krause (2002) explored the issue with a sample of 748 White and 752 Black

people who were at least 66 years old. Krause found that church-based social support influenced the health of older people through these paths: (1) Frequent church attendance by older people is accompanied by the feeling that their congregations are more cohesive; (2) those in highly cohesive congregations receive more emotional and spiritual support from their congregants; (3) receiving such support enhances older people's personal relationship with God; (4) and older people with enhanced personal relationship with God are more optimistic; and finally (5) more optimistic older people enjoy better health.

The path to better health outcome found in Krause (2002) involved optimism. Optimism may mediate the relationship between religious support and well-being. Optimism has not received much attention as a mediator in the relationship between religious support and well-being, even in the literature on social support in secular contexts. Instead, social support has been used as a mediator between optimism and well-being (e.g. Ferguson & Goodwin, 2010).

A few studies have shown that the reverse, that is, optimism as a mediator is plausible. Using a sample of 201 workers in insurance companies, Karademas (2006) found that optimism partially mediated relationship between social support and well-being measures of life satisfaction and depression. Empirical studies provide evidence that may support the mediating role of optimism. First, social support has been found to be associated with optimism. Symister and Friend (2003) for example found that among those with chronic illness, social support was associated with increased optimism through high self-esteem. Second, optimism is associated with well-being. Ju et al. (2013) used a sample of 252 community dwelling older people and found that optimism was directly associated with subjective well-being- life satisfaction, positive and negative emotions. It was also indirectly associated with subjective well-being through meaning in life.

Another plausible mechanism is through meaning in life, specifically the presence of meaning. Religious support and social support from secular settings have been found to be linked with meaning in life. For instance, Krause (2008) used a sample of 607 older people and found that emotional and spiritual support sustained meaning derived from religion over three years. Spiritual support had a greater influence on the relationship.

With a secular social support measure, Krause (2008) found that enacted support, negative interaction and anticipated support were related to change in meaning in life over time. Precisely, higher level of anticipated support was related to deeper sense of meaning. Similarly, enacted support was linked with the sense of meaning in old age over time. However, negative interaction was associated with lower sense of meaning in life, at least initially.

Like optimism, a sense of meaning in life is associated with well-being. For instance, Battersby and Phillips (2016) found that the presence of meaning was positively related to life satisfaction and positive affect for younger and older Australian samples. The presence of meaning was negatively related to negative affect. With respect to the search for meaning, it had no significant relationship with the well-being of older participants. For the younger participants, the combination of high presence of meaning and low search for meaning yielded positive mental health outcomes.

The sense of meaning in life is often cited as a protective factor against the wish to die or hasten death (Monforte-Royo, Villavicencio-Chávez, Tomás -Sábado, & Balaguer, 2011). Even though the desire to die is recognized as an initial phase of the process of suicide, the construct has been less examined than suicide ideation and actual suicide behaviours (Lester, 2013). Some of the studies that have examined the wish to die have been based on the responses of significant others or caregivers. For example, Morita et al. (2004) used a sample of 290 bereaved family members

to assess death wish and the wish to hasten death among Japanese cancer patients who had been receiving palliative care. The researchers found that 62 (21%) families reported that patients had expressed death wish to family members or physicians/nurses. Within these 62 families, 21 of them revealed that patients had requested for death to be hastened. The families of patients with the wish to die and the wish to hasten death did not cite physical symptoms as major factors for these wishes. Instead, they mentioned reasons including meaninglessness.

With regards to suicidal ideation, Heisel and Flett (2008) found that meaning in life was an important buffer against suicidal ideation. Meaning in life was negatively associated with suicidal ideation when religiosity variables and psychological well-being were not. The study was based on a sample of 107 older people, aged between 67 and 98, and recruited in community, residential and healthcare settings.

Studies examining the role of religious support in mental health have mostly produced results confirming the beneficial impact of the construct, albeit a few studies finding no significant effect. The literature on religious support has focused predominantly on the direct relationship between religious support and mental health with little attention paid to the mechanisms that make it possible for the beneficial effect of religious support. Optimism and meaning in life may be the mechanisms through which the salutary effect is made possible.

Spirituality and Well-being

The literature on spirituality shows consistent associations between spirituality and well-being indicators across various samples. For example, Pandya (2016) found that both spirituality and religiousness were related to subjective well-being. The study was composed of 544 older adults living in *Pitamaha Sadans* (emphasis not mine) old age homes in India. In this study spirituality was assessed with two measures: Daily Spiritual Experience Scale (DSES) (Underwood, 2006,

2011) and Spiritual Experience Index, revised (SEI-R) (Genia, 1997). Religiosity was assessed using Huber and Huber's (2012) Centrality of Religiosity Scale (CRS). The results of the study revealed that religiosity predicted happiness, albeit a smaller effect size. The odd ratios of the spirituality predictors were greater than one, implying that older people with higher scores on both DSES and SEI-R were more likely to have higher levels of happiness. With regards to life satisfaction, CRS was not a significant predictor. Instead, those with higher education (bachelor's degree and above), higher scores on both DSES and SEI-R were more likely to have higher levels of life satisfaction.

With respect to the link spirituality has with suicide ideation and behaviour, studies have shown that spirituality can provide a protective cover. West, Davis, Thompson, and Kaslow (2011) examined the role of spiritual well-being as a buffer against suicide among 156 suicidal African American women with a mean age of 36 years. The results of the study showed that spiritual well-being was significantly related to reasons for living. Specifically, women with high levels of spiritual well-being were thirteen times more likely to report they had reasons for living than their counterparts with lower levels of spiritual well-being. Other possible protective factors including optimism, social/family support, coping, and effectiveness at obtaining resources were examined in the study. Spiritual well-being was still significantly related to well-being even after the three variables were controlled. When the other variables were tested independently for their unique contributions by controlling three other variables which included spiritual well-being, none of them emerged as a significant predictor.

The studies reviewed up to this point have come from non-African settings. There are few studies that have assessed the relationship between spirituality and well-being among older Africans. Hamren, Chungkham and Hyde's (2015) study is one example. They studied 214

older Ethiopians living in Addis Ababa who were between 55 and 92 years.

Religiosity/spirituality was measured with the Brief Multidimensional Measures of Religiousness/Spirituality (BMMRS) (Fetzer Institute & National Institute on Aging, 1999). The composite score of all its dimensions predicted the quality of life of older Ethiopians even after the effects of socio-demographic variables (age, gender, marital status and educational level) and social support were controlled.

Although the preponderance of evidence points to strong associations between spirituality and well-being indicators, a few studies have found statistically non-significant results. For instance, Hafeez and Rafique (2013) found that religiosity but not spirituality predicted the psychological well-being of 60 older Muslims in old homes in Pakistan. Spirituality was assessed with the composite scores of the subscales of Piedmont's (1997) Spiritual Transcendence Scale whereas the Religious Orientation Scale (Gorsuch & McPherson, 1989) was used to assess religiosity. This rather surprising result may be explained by the small sample size of 60 used in the study. The sample of 60 older people was too small to achieve the statistical power (.80) required to detect medium effect sizes (Cohen, 1992).

Mediators of the associations between Spirituality and Well-being

Although the preponderance of the literature on religion/spirituality shows a direct association with well-being, the underlying mechanism for the association is quite unclear (Cowlshaw et al., 2013; Park, 2007; Salsman, Brown, Bretching, & Carlson, 2005) Studies that have attempted to address this gap in the literature have found that meaning in life explains why spirituality is associated with mental health (e.g. Khumalo, Wissing, & Schutte, 2014). However, these studies have often investigated the mediating role of meaning in life among younger samples or individuals from across different age groups (e.g. Khumalo, Wissing, & Schutte, 2014; Yoon et

al., 2015). This has implications on the generalization of the findings to elderly populations. With a younger sample of 115 university students ($M = 22$ years), Wnuk and Marcinkowski (2014) found that purpose in life fully mediated the association between spirituality and life satisfaction. Purpose in life also partially mediated the relationship between spirituality and positive affect.

Yoon et al. (2015) also found with a sample of 450 adults (between 18 and 80 years) in the US that the relationship between daily spiritual experience and hedonic well-being (positive affect and life satisfaction) was partially mediated by the presence of meaning in their lives.

With respect to an exclusively older population, Cowlshaw et al. (2013) examined the role of the sense of coherence, which includes dimensions of meaningfulness and comprehensibility, as mediators between spirituality and life satisfaction over time. The researchers found that the dimension of meaningfulness partially mediated the relationship between spirituality and increase in life satisfaction over time.

Optimism is also plausible mechanism for the salutary effects of spirituality (Park, 2007).

Optimism has not received much attention as meaning in life as a mediator. Like most of the mediation studies that used meaning in life, the use of optimism as a mediator is among younger samples. For example, Salsman and his colleagues (2005) examined the mediating role of optimism among 214 University of Kentucky students with mean age of 20.2 years. Both religiousness and spirituality were assessed in this study. The researchers found that optimism partially mediated the relationship between prayer fulfilment- a dimension of the spirituality scale used in the study- and life satisfaction. Higher levels of prayer fulfillment were associated with increased levels of optimism which in turn was associated with higher levels of satisfaction in life. Optimism was not a significant mediator between prayer fulfilment and psychological

distress but it fully mediated the relationship between intrinsic religiousness and psychological distress. Optimism partially mediated the relationship between intrinsic religiousness and life satisfaction as well.

Using a sample of 66 African American female suicide attempters with a mean age of 36 years, Hirsch, Nsamenang, Chang, and Kaslow (2014) found that overall spiritual well-being and existential well-being were indirectly associated with lower depressive symptoms through optimism and pessimism. With an older sample and larger sample size of 600 South Korean elderly cancer patients, Nam et al. (2016) also found that the association between spirituality and depressive symptoms was mediated through optimism and pessimism. Higher levels of spirituality were related to increased levels of optimism which in turn decreased the possibility of developing depression symptoms. For pessimism, higher levels of spirituality were related to decreased level of pessimism which in turn was associated with decreased depression symptoms. In summary, the literature is replete with studies finding direct associations between spirituality and mental health. Some of these studies have shown that spirituality is related to greater subjective well-being and lower suicidal ideation (e.g. Pandya, 2016; West et al., 2011). The mechanism through which the beneficial effects of spirituality operate has not received much attention in the literature. Although meaning and optimism have been proposed as possible mechanisms for the salutary effects of spirituality, the limited studies that have examined the mediating roles of these variables have often focused on younger populations or individuals across various age groups. Exclusive focus on older populations is lacking in the literature.

Rationale of the Study

The literature on ageing and well-being in Ghana has been focused predominantly on income and work, living arrangement, health and intergenerational support as indicators of well-being in old

age (Aboderin, 2004). There are gaps in the literature with respect to studies on personal and social resources such as spirituality and religious support. Even though spirituality, for example, has emerged in the findings of some research involving older people, spirituality has not been the main focus. For example, in a study conducted by de-Graft Aikins (2003) on the social representations of diabetes in rural and urban Ghana, the respondents drew on their religion/spirituality together with other sources in making meaning of their illness. As mentioned in the review of studies, spirituality and religious support are important predictors of well-being in late life. Therefore, it is important to investigate how these missing dimensions impact on the well-being in the Ghanaian context.

The literature on the influence of spirituality and religious support has mainly focused on the direct effects of these constructs on health and well-being. The mechanism through which spirituality and religious support impact on well-being is quite unclear (Cowlshaw et al., 2013; Park, 2007). The studies that have attempted to address this gap have used meaning in life and optimism as mediators. However, these studies mostly focus on younger populations (e.g. Salsman et al., 2005; Wnuk & Marcinkowski, 2014). Late adulthood may throw some dynamics into the mediating roles of meaning in life and optimism. For instance, Erikson's (1977) theory emphasizes the importance of meaning in late life but optimism may not be very important in late life (e.g. Lennings, 2000).

Studies that have examined well-being have paid limited attention to comparing well-being between rural and urban samples. Life in rural and urban areas may differ in important ways that may affect well-being (e.g. Easterlin, Angelescu, & Zweig, 2011). Rural life in Ghana, for example, is generally characterized by underdevelopment and poverty, reflected in low income levels, poor and inadequate housing structures and so forth (Mba, 2004). This may throw some

dynamics into the well-being of older people. In addition, life in rural and urban Ghana may influence how spirituality and religious support are related to well-being.

The wish to die has been less examined in suicide research compared to suicidal ideation and actual suicide behaviours despite the recognition that it is the initial phase of the process of suicide (Lester, 2013). When it has been examined, often, single-item indicators are used to assess the wish (e.g. Baca-Garcia et al., 2011). Additionally, in some of the studies the suicide ideation scales used incorporate items on the wish to die and suicidal ideation (Lester, 2013). These studies have always used total scores and so it makes it difficult to distinguish the wish to die from suicidal ideation (Lester, 2013). Understanding factors that contribute to the desire to die may be an important step towards ensuring well-being and reducing suicide in late life (Lapierre et al., 2015). The current study will therefore attempt to address the identified gaps in the literature on ageing and well-being.

Conceptual Framework of the Study

The study drew on the religious coping theory (Pargament, 1997), meaning making model (Park & Folkman, 1997), psychosocial theory of development (Erikson, 1977) and the extension of the attachment theory (Kirkpatrick, 1992) in formulating the conceptual framework which encompasses the mediating roles of the presence of meaning and optimism. Figure 1 displays the conceptual framework.

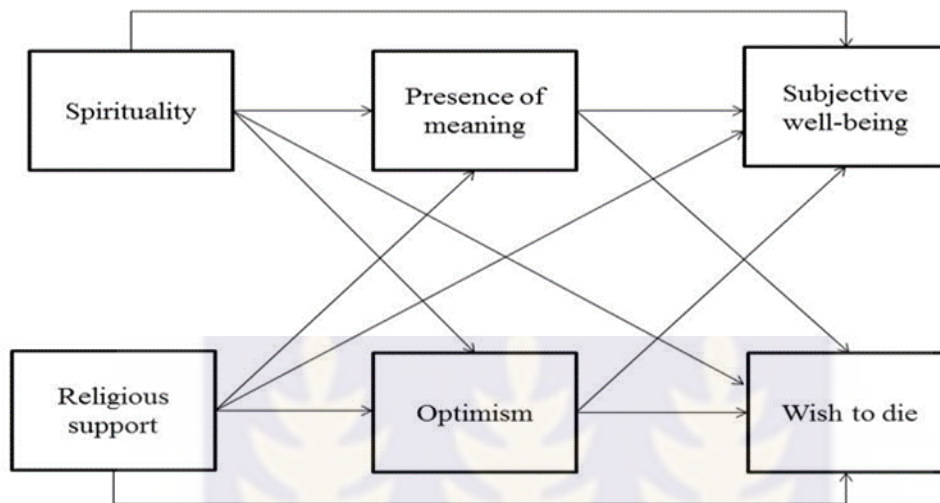


Figure 1: Conceptual model

Figure 1 shows the direct relationships between spirituality, subjective well-being and the wish to die. It also shows the direct relationships between religious support, subjective well-being and the wish to die. The figure displays the presence of meaning and optimism as possible mechanisms for the direct relationships.

Statement of Hypotheses

The hypotheses were formulated based on objectives of the study, the theoretical framework and the studies reviewed.

1. Rural residents will score lower on well-being than urban residents.
 - 1a: Rural residents will score lower on subjective well-being than urban residents.
 - 1b: Rural residents will score higher on the wish to die than urban residents.
2. The presence of meaning will mediate the relationships between spirituality and well-being.

- 2a: The presence of meaning will mediate the relationship between spirituality and subjective well-being.
- 2b: The presence of meaning will mediate the relationship between spirituality and the wish to die.
3. Optimism will mediate the relationships between spirituality and well-being.
- 3a: Optimism will mediate the relationship between spirituality and subjective well-being.
- 3b: Optimism will mediate the relationship between spirituality and the wish to die.
4. The presence of meaning will mediate the relationships between religious support and well-being.
- 4a: The presence of meaning will mediate the relationship between religious support and subjective well-being.
- 4b: The presence of meaning will mediate the relationship between religious support and the wish to die.
5. Optimism will mediate the relationship between religious support and well-being.
- 5a: Optimism will mediate the relationship between religious support and subjective well-being.
- 5b: Optimism will mediate the relationship between religious support and the wish to die.

Operational Definition

The following operational definitions of key concepts were used in the study.

Spirituality: It is defined as the sense of connection with or faith in God or a higher power which directs the strivings of individuals. The scores on the spiritual support subscale of the Spiritual Experience Index- Revised (Genia, 1997) indicate spirituality.

Religious support: It refers to perceive care and availability of support from religious leaders and participants of the religious groups of individuals. The combined scores on the two subscales of the Multi-Faith Religious Support Scale (Bjorck & Maslim, 2011) represent religious support.

Presence of meaning: It is defined as comprehension of one's significance in life and having a sense of purpose in life (Steger, Frazier, Oishi, & Kaler, 2006). The scores on the presence of meaning subscale of the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006) indicate the presence of meaning.

Optimism: It refers to the extent to which individuals' possess generalized expectations that they will obtain favourable outcomes in life (Carver, Scheier, & Segerstrom, 2010). Life Orientation Test-Revised (LOT-R; Scheier, Carver & Bridges, 1994) scores is optimism in this study.

Subjective well-being (SWB): It is defined as the cognitive and affective evaluations people make about their lives. The composite scores of the Satisfaction with Life scale (SWL; Diener, Emmons, Larsen, & Griffin, 1985) and positive affect (SPANE-P) and negative affect (SPANE-N) subscales of the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010) is subjective well-being. The formula for arriving at the composite score is: Subjective well-being = Life satisfaction + (Positive affect – Negative affect).

Wish to die: It refers to the extent to which individuals have wished that they were dead. In this study it is the scores on the Wish to be dead scale (Lester, 2013).

CHAPTER THREE

METHODOLOGY

Introduction

This chapter describes the methods and procedures employed in the study. The chapter describes issues that include the research design and research setting. The population, sample size and the sampling technique used to draw the sample from the population are also discussed.

Subsequently, the procedures involved in the data collection as well as ethical considerations are discussed in the chapter.

Research Design

The current study utilized a cross-sectional survey design. Surveys provide means of assessing people's thoughts, opinions, and feelings (Shaughnessy, Zechmeister, & Zechmeister, 2012).

Therefore, the current study used survey to collect data about the thoughts and feelings of participants on a number of issues, including meaning in life, spirituality and religious support.

With the cross-sectional survey design, one or more samples are drawn from the population at one point in time (Shaughnessy, Zechmeister, & Zechmeister, 2012). Data was collected from each participant just once.

Research Setting

The research was conducted in rural and urban settings. Two rural communities in Volta Region were conveniently selected as the rural setting. They were Matse and Taviefe. The two communities are about 10 km apart. Matse and Taviefe are predominantly farming communities in the Ho Municipality. In the Ho Municipality, the majority of older people live in urban areas (62.1%) compared to rural areas (37.9%) (Ghana Statistical Service, 2014a). From the 2010

census, with the exception of the three regions in the north of Ghana, the Volta Region lost the most of its population to other regions than it gained, with the Greater Accra and Eastern Regions being the most popular destinations (Ghana Statistical Service, 2013). The net loss of the population to other regions in part reflects the socio-economic development in the region. Compared to the regions in the south of Ghana, the Volta Region faces considerable disadvantage in terms of access to modern infrastructure which includes educational institutions and health facilities (Ghana Statistical Service, 2013). The resulting loss of youthful population may undermine intergenerational care and support from children to older people (Ghana Statistical Service, 2013).

The urban setting was also made up of two communities in the Greater Accra Region: Dome and Achimota. They were selected based on proximity and convenience. As is typical of urban areas in Ghana, most of the residents are migrants. That is, they were not born there. For the Ga East Municipality, where Dome is, 71.1% of the total population is made up of migrants (Ghana Statistical Service, 2014b).

Population of the Study

The study was composed of females and males in the designated research settings who were at least 60 years old. Sixty years is the official retirement age in Ghana and it is on this basis that a person is considered an old or elderly person (Ghana Statistical Service, 2013). Initially, the study aimed for a minimum age of 65 years in correspondence with Erikson's (1977) last stage of psychosocial development. However, doing so would have made the data collection more difficult because majority of older people in Ghana are between 60 and 64 years (Ghana Statistical Service, 2013).

Sample and Sampling Technique

Purposive sampling technique was used to identify those who met the predetermined criteria of being at least 60 years of age and willing to participate. The sampling frame, however, differed between the rural and the urban settings. For the rural setting, convenient sampling was used to select community-dwelling older people in Matse and Taviefe. However, for the urban setting, the participants were conveniently sampled from 6 churches, a mosque, a hospital and a market. This was because sampling the residents in the urban setting through the house-to-house method used in the rural setting was time-consuming, expensive and ineffective in recruiting the participants in the urban setting.

Sample Size

The intended sample size for the study was 120 older people per setting- a total of 240. However, there were 120 participants for the rural setting and 115 for the urban setting. The selection of the sample size for the study was informed by the rule of thumb for multiple regression in Tabachnick and Fidell (2007) which is $N \geq 50 + 8m$ (where m is the number of independent variables). This is based on the assumption that there is a medium-sized relationship between the independent and the dependent variable, confidence level of 95% ($\alpha = .05$), and power of 80% ($\beta = .20$). In this study, there were 4 independent variables and so the minimum sample size is 90. The total sample size surpassed the minimum sample of 82.

Table 1

Socio-demographic characteristics of the sample of older people

Characteristic	Rural (<i>n</i> = 120)		Urban (<i>n</i> = 115)		Combined (<i>N</i> = 235)	
	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%
Age						
60-74	77	64.2	90	78.3	167	71.1
75-84	28	23.3	21	18.3	49	20.9
85 and above	15	12.5	4	3.5	19	8.10
Mean Age (<i>SD</i>), range	71.36 (9.29), 60-104		68.22 (7.62), 60-101		69.82 (8.64), 60-104	
Sex						
Male	49	40.8	54	47.0	103	43.8
Female	71	59.2	61	53.0	132	56.2
Marital status						
Never married	3	2.5	5	4.30	8	3.40
Married	55	45.8	65	56.5	120	51.1
Separated/divorced	30	25.0	17	14.8	47	20.0
Widowed	32	26.7	28	24.3	60	25.5
Education						
None	15	12.5	10	8.70	25	10.6
Primary school	33	27.5	15	13.0	48	20.4
Middle school	48	40.0	42	36.5	90	38.3
Secondary school	4	3.3	16	13.9	20	8.50
Sixth form	2	1.7	4	3.50	6	2.6
Tertiary	17	14.2	26	22.6	43	18.3
Religious affiliation						
Christian	116	96.7	100	87.0	216	91.9
Muslim	3	2.5	15	13.0	18	7.70
Traditionalist	1	.8	0	0	1	.40

Table 1 continued.

Socio-demographic characteristics of the sample of older people

Characteristic	Rural		Urban		Combined	
	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%
Monthly income (GH¢)						
Below 100	36	30.0	10	8.70	46	19.6
Between 100 and 199	36	30.0	22	19.1	58	24.7
Between 200 and 500	29	24.2	26	22.6	55	23.4
Between 501 and 800	10	8.3	18	15.7	28	11.9
Between 801 and 1200	7	5.8	10	8.70	17	7.20
1201 and above	1	.8	14	12.2	15	6.40
Economic Activity						
Yes	38	31.7	59	51.3	97	41.6
No	82	68.3	54	47.0	136	58.4
Pension						
Yes	34	28.3	39	33.9	73	31.1
No	85	70.8	74	64.3	159	67.7
Living Arrangement						
Alone	7	5.80	6	5.20	13	5.50
Spouse alone	22	18.3	11	9.60	33	14.0
Spouse and children	8	6.70	21	18.3	29	12.3
Spouse, children and grandchildren	3	2.50	14	12.2	17	7.20
Spouse, children, grandchildren and others	3	2.50	6	5.2	9	3.80
Spouse and grandchildren	1	.80	0	0	1	.40
Spouse and others	2	1.70	1	.90	3	1.30
Children only	37	30.8	28	24.3	65	27.7
Children and grandchildren	4	3.30	11	9.60	15	6.40
Grandchildren only	5	4.20	7	6.10	12	5.10
Grandchildren and others	3	2.50	1	.90	4	1.70
Others	25	20.8	7	6.10	32	13.6

Note: others = extended family members

Sample Characteristics

Table 1 shows that the sample was composed of more females than males in both rural (59.2%) and urban (53.0%) settings. The mean age of the rural and urban residents was 69.8 years ($SD = 8.64$). The samples were mostly in the age category of 60-74 (71.1%), followed by 75-84 (20.9%) and 85 years and above (8.1%). Most of those in the oldest-old category (85 and above) were from the rural (12.5%) than the urban setting (3.5%). The most frequent level of education was middle school (38.3%) for the rural and urban settings. There were more urban residents (22.3%) who had obtained tertiary education than rural residents (14.2%). Those with at least primary school education (20.4%) were more than those with no education (10.6%). The sample was predominantly composed of Christians (91.9%), followed by Muslims (7.7%) and Traditionalists (0.40%). There were a few pension beneficiaries (31.1%). There were fewer residents engaged in economic activities in the rural setting (31.7%) than the urban setting (51.3%). There were more rural residents (30%) in the below GH¢ 100 category than urban residents (8.7%). There were fewer rural residents (0.8%) in the GH¢ 1201 and above category than urban residents (12.2%). Both rural and urban residents lived with someone than living alone. They were more likely to live with their children only (27.7%).

Measures

Data was collected using a questionnaire with measures for religious support, spirituality, meaning in life, optimism, life satisfaction, positive affect, negative affect, wish to die, self-rated health and social support. The measures are described and their psychometric properties provided.

Section 1: Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler 2006)

Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a 10-item measure which was used to assess meaning in life in two dimensions. The dimensions in the measure are the presence of meaning (MLQ-P) and the search for meaning (MLQ-S). Each of the dimensions has 5 items. The measure is scored on a 7-point response range (1 = Absolutely untrue to 7 = Absolutely true). Higher scores on the dimensions represent strong presence of meaning and search for meaning. Samples of items on each dimension include “My life has a clear sense of purpose.” for the presence of meaning dimension and “I am seeking a purpose or mission for my life.” for the search for meaning dimension. The measure was validated with a South African sample of undergraduate students, with Cronbach’s alpha of .85 for MLQ-P and .84 for MLQ-S reported (Temane, Khumalo, & Wissing, 2014).

Section 2: Spiritual Experience Index (Revised) (Genia, 1997)

Genia (1997) developed the 23-item Spiritual Experience Index (revised) to assess spiritual maturity. The measure has two subscales: spiritual support and spiritual openness. The spiritual support is a 13-item subscale that assesses reliance on spirituality for support in life. Spirituality is operationalized as this subscale in this study. A sample of an item on the subscale is “My faith guides my whole approach to life.” The spiritual openness subscale assesses the extent to which one has a sense of universal connectedness and openness to divergent faiths. A sample item is “Ideas from faiths different from my own may increase my understanding of spiritual truth.” The spiritual openness subscale has four items that are reverse scored. The measure is scored on a 6-point Likert scale (1 = Strongly disagree; 6 = Strongly Agree). The measure was initially designed as a unidimensional measure of spiritual maturity (Genia, 1991) but later factor analysis distinguished the two dimensions of the measure (Genia, 1997). The measure is therefore scored

separately with higher scores on each subscale indicating high spiritual support and spiritual openness. Pandya's (2016) study observed internal consistency of .89 for the whole measure.

Section 3: Multi-Faith Religious Support Scale (MFRSS; Bjorck & Maslim, 2011)

Multi-Faith Religious Support Scale (MFRSS; Bjorck & Maslim, 2011) was used to assess religious support. The measure is a modified version of the Religious Support Scale (RSS; Fiala, Bjorck, & Gorsuch, 2002) oriented towards the Christian faith with terminologies including church and congregation. The MFRSS uses generic language that makes it applicable to people of different faiths. The measure has three subscales: religious leader support (RLS), participant support (RPS) and Allah support (AS). Two subscales were of interest for this study and only those two were used. They were the religious leader support and the participant support subscales. Both subscales contain seven items each, with one item on each subscale reversed scored. Participants rated the 14-item measure using a 5-point scale (1= strongly disagree to 5= strongly agree). Two statements in this scale are: "I can turn to my religious leaders for advice when I have problems" and "If something went wrong, other participants in my religious group would give me help." Higher scores on the measure indicate greater religious support. Bjorck and Maslim (2011) validated the scale among a sample of Muslim women and found Cronbach's alpha coefficients of .94 for RLS and .93 for RPS.

Section 4: The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988)

The measure is used to assess perceived social support across three dimensions: friends, family and significant other. There are 12 items in total and each of the dimensions has 4 items. The measure has 7-point response range, from 1 (very strongly disagree) to 7 (very strongly agree).

Sample items on the measure are “I can count on my friends when things go wrong.” for the friends dimension, “I get the emotional help and support I need from my family.” for the family dimension and “There is a special person who is around when I am in need.” for the significant other dimension. The measure has been validated in Ghana, with Cronbach’s alpha of .81 for the whole measure and .73, .61 and .74 for family, friends and significant others subscales, respectively (Wilson, Yendork & Somhlaba, 2016). The subscales are combined to reflect social support in most studies (e.g. Hamren, Chungkham, & Hyde, 2015). High scores on the scale represent greater level of social support.

Section 5: The Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010)

The SPANE is used to assess positive affect and negative affect- two components of the affective aspect of subjective well-being. It has 6 items apiece for positive and negative affect. The measure has a response range of five, from 1 = very rarely or never to 5 = very often or always. An example of some of the items the measure contains is “joyful” for positive affect and “sad” for negative affect. High internal consistency of .92 for positive affect and .91 for negative affect was reported in Li, Bai, & Wang’s (2013) study of the psychometric properties of the measure with a large sample of Chinese.

Section 6: The Satisfaction with Life scale (Diener, Emmons, Larsen, & Griffin, 1985)

The Satisfaction with Life scale assesses the cognitive component of subjective well-being- life satisfaction. It is a 5-item scale and it has a 7-point response range from 1 (strongly disagree) to 7 (strongly agree). Higher scores on the measure indicate greater satisfaction with life. A sample of an item is “So far I have gotten the important things I want in life.” Westaway, Martiz, and Golele (2003) with a South African sample observed Cronbach’s alpha of .92.

Section 7: The Life Orientation Test-Revised (LOT-R) (Scheier, Carver, & Bridges, 1994)

The 10-item measure is used to assess optimism. There are 3 items each assessing optimism and pessimism. The rest of the items are fillers. The scale is scored on a 5-point scale, from 1 (strongly disagree) to 5 (strongly agree). Example of items in the measure are “I’m always optimistic about the future” for optimism and “If something can go wrong for me, it will.” The measure can be scored unidimensionally as Scheier, Carver and Bridges (1994) recommended. Pessimism scores are reverse scored to use the measure unidimensionally. Ju, Shin, Kim, Hyun, and Park (2013) reported an alpha coefficient of .77 for the measure.

Section 8: Short-Form Health Survey (SF-12) (Ware, Kosinski & Keller, 1996)

The Short-Form Health Survey (SF-12) is a 12-item measure which assesses physical and mental components of health. The measure has 2-point response range for items 4, 5, 6, and 7. Items 2 and 3 have a 3-point response range. Items 1, 8 and 12 have a 5-point response range. Items 9, 10, and 11 have a 6-point response range. A sample item is “In general, would you say your health is...” The scale is scored with algorithm provided as part of the package that comes with the measure. Not many have the package and so other researchers have provided alternative means of scoring (e.g. Ottoboni, Cherici, Marzocchi, & Chattat, 2017). The algorithms generate two separate weighted scores of physical health (PCS) and mental health (MCS). The SPSS script provided by Ottoboni et al. (2017) was used to score the measure. Pakpour et al. (2011) reported Cronbach’s alpha of 0.89 and 0.90 for the physical and mental components respectively.

Section 9: The Wish to be Dead Scale (Lester, 2013)

The wish to be dead scale (Lester, 2013) is a 10-item scale which assesses the desire or wish to die. The measure has a true/false response format. However, Lester (2013) also used a 6-point

range response format, from 1 (strongly disagree) to 6 (strongly agree) and found that the psychometric properties were still good. Lester (2013) observed Cronbach's alpha of .91 with the 6-point response format and .83 with the 2-point format. One of the items on the measure is "I have on occasions lost my desire to live."

Procedure for Data Collection

The study commenced with application for ethical approval from the Ethics Committee for Humanities (ECH) in University of Ghana. After receiving ethical approval for the research, the questionnaire was translated into two Ghanaian languages: Twi and Ewe. These two languages represent major languages spoken in Ghana. The questionnaire was translated because literacy rate and education level is generally low among older people in Ghana (Ghana Statistical Service, 2013) and so administering the English questionnaire would have been inappropriate.

Before the translation of the questionnaire, some of the items which did not look suitable to the Ghanaian context were modified. Three items from the Short-Form Health Survey (Ware, Kosinski, & Keller, 1996) were modified. The items were "Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf", "climbing several flights of stairs" and "Have you felt downhearted and blue?" They were modified to "Moderate activities, such as moving a table, bathing, dressing or cooking", "Walking a mile" and "Have you felt downhearted and sad?"

The translation into the Twi language was done by a University of Ghana graduate student in Linguistic who does Twi translation as a part-time job. The translated version of the English questionnaire was then back-translated by a competent graduate student. There were a few disagreements between the two versions of the questionnaire. The two translators sat together to resolve the disagreements before the translated Twi version was accepted. For example, the word

“purpose” was translated as “mfasoɔ” but the graduate student thought “botae” was better. They both agreed on botae. The other disagreements were resolved in a similar fashion.

The translation of the English questionnaire to the Ewe language was done by a journalist in Ho, Volta Region. He also does translation of English materials including books, hymns, among others as his part-time job. The translated version of the questionnaire was given to a trainee teacher who is competent in the Ewe language to back-translate. The resolution of disagreements in the two versions of the questionnaire was handled in a similar manner as the Twi translation.

Pilot study

A pilot study was conducted to assess the reliability or internal consistency of the measures in the questionnaire. Given that the measures were developed in non-Ghanaian context, it was important to conduct a pilot study. The pilot study was also an avenue of identifying possible challenges that may arise, preparing the researcher in dealing with them in the main study. The questionnaires in the pilot study were not self-administered. Instead, the questionnaires were interviewer-administered, that is, assisting in reading and ticking the responses of the participants. The pilot study included 33 older people in the two research settings. Hill (1998) has suggested that using 10 to 30 participants is appropriate for a survey research.

Among the 33 participants, 18 were urban residents whereas 15 were rural residents. There were more females ($n = 24$) than males ($n = 9$) in the combined sample. The combined sample had a mean age of 71.76 ($SD = 9.24$). The pilot study showed that the measures in the questionnaire were at acceptable alpha levels, with all but one subscale between .76 and .95 (see Table 2). The spiritual openness subscale of the Spiritual Experience Index (Revised) had internal consistency of .63.

Table 2

Internal consistency of the measures used in the pilot study (N = 33)

Measure	Cronbach's alpha
Meaning in Life Questionnaire- Presence of meaning subscale	.92
Meaning in Life Questionnaire- Search for meaning subscale	.88
Spiritual Experience Index (Revised)- Spiritual support subscale	.83
Spiritual Experience Index (Revised)- Spiritual openness subscale	.63
Multi-Faith Religious Support Scale	.93
Multi-Faith Religious Support Scale- Participant support subscale	.88
Multi-Faith Religious Support Scale- Leader support subscale	.89
The Multidimensional Scale of Perceived Social Support	.90
The Multidimensional Scale of Perceived Social Support- Friend subscale	.88
The Multidimensional Scale of Perceived Social Support- Family subscale	.95
The Multidimensional Scale of Perceived Social Support- Significant other	.88
The Scale of Positive and Negative Experience (SPANE)- Positive affect	.80
The Scale of Positive and Negative Experience (SPANE)- Negative affect	.76
The Scale of Satisfaction with Life	.87
The Life Orientation Test-Revised (LOT-R)	.85
Short-Form Health Survey (SF-12)	.86
The Wish to be Dead Scale	.92

Some observations were made in the pilot study that influenced the main study. One, the items of the subscale in the MSPSS (Zimet, Dahlem, Zimet & Farley, 1988) that referred to perceived support from friends were slightly modified to include neighbours. Some of the participants,

those in the rural areas in particular, made references to their neighbours when they were responding to items on the friends subscale and to a little extent, the significant other subscale (special person). Hamren, Chungkham, and Hyde (2015) also included neighbours to the same measure in their study among older people in Ethiopia. An example of the modified items is “I can count on my friends and neighbours when things go wrong.”

Two, it became apparent that recruiting participants from the urban setting via the intended house-to-house method was going to be expensive, time-consuming and stressful. Hence, there was a need to adopt other methods of recruiting participants for the urban aspect of the main study. There were no such difficulties with the rural setting.

The Main Study

Data collection began in the rural setting. Three research assistants used two weeks to collect data from 90 community-dwelling older people in Matse and Taviefe. Two of the research assistants were student nurses and one had completed Senior Secondary School. The remaining 30 of the data was collected by the researcher two weeks afterwards. It took approximately one month to collect the data in the rural setting.

For the urban setting the researcher sent letters of introduction from the Department of Psychology, University of Ghana to 6 churches, a mosque and a hospital. During the week days, data was collected from either the hospital in Achimota or the Dome market. Enveloped questionnaires were given to individuals at the mosque who met the inclusion criteria to return them the following week. The same procedure was used for the churches on Sundays. The response rate for churches was moderate. In total 80 questionnaires were given out but only 60 were returned. Out of the 60 returned, 9 were removed because there were significant sections in the questionnaires left uncompleted. For the mosque, 9 out of 13 questionnaires were returned

fully completed. The other 4 had a significant number of items in a few sections of the questionnaire uncompleted and so they were removed. The rest of the data was collected by the researcher at the hospital (25) and the market (30). The data collection for the urban settings took approximately two and a half months.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 18.0 was used to analyze the data. The data was entered as and when the questionnaires were received. Principal Component analysis (PCA) was conducted for all items of the measures used to determine construct validity (Tabachnick & Fidell, 2007). Descriptive statistics were used in presenting socio-demographic information about the sample. Inferential statistics (correlation and regression) were used to test the relationships among the various variables in the study. The independent t-test was used to test for differences in subjective well-being and the wish to die between older residents in the rural and urban settings.

Ethical Consideration

The research was conducted in accordance with the ethical guidelines. The participants were made aware of the purpose and the procedures involved in the study. In addition, it was explained to them that participation was voluntary and that they could decline to participate at any point even after their initial consent. Only one participant declined to participate after initial consent was given, citing tiredness as a reason.

Aside from the informed consent issue, the participants were assured that the information they provided will be treated confidentially and that it was not a requirement for them to write their names.

CHAPTER FOUR

RESULTS

The chapter presents the results of the study. The first part of the chapter focuses on issues concerning internal consistency and validation of measures used in the study. Descriptive statistics and inferential statistics, including correlation, independent t-test and multiple regressions that are used to test the hypotheses on differences and relationships are presented.

Validation of Measures

The measures used in the study were subjected to principal component analyses (PCA) to ascertain construct validity in the Ghanaian setting. The PCA was conducted based on the entire sample of 235 older people in rural and urban settings. The principal component analyses for measures that assessed the independent and dependent variables that have more than one component are presented.

Spiritual Experience Index (Revised) (SEI-R)

The 23 items of Spiritual Experience Index- Revised (SEI-R) were subjected to principal component analysis (PCA). Before PCA was performed, the suitability of the data for factor analysis was assessed. The correlation matrix showed that some of the coefficients were .40 and above. The Kaiser-Meyer-Olkin value of .77 exceeded the recommended value of .6 (Kaiser, 1970, 1974). Additionally, the Bartlett's Test of Sphericity (Bartlett, 1954) was significant, ($\chi^2(91) = 784.11, p < .001$). Thus, it supports the factorability of the correlation matrix.

Six components with eigenvalues exceeding 1 were revealed in the principal components analysis. The components explained 18.3%, 11.9%, 7.9%, 5.4%, 5.1%, and 4.6% of variance respectively. When Cattell's (1966) scree plot was examined there was a clear break after the

fourth component. The four components were not retained. Instead, the subscales of the measure were analyzed separately.

When items 1 to 13 on the first subscale (spiritual support) were entered separately, three components emerged, with most of the items loading at least .30 on two components. Four of the items with poor loadings (less than .21) on the first factor were deleted. The items were 4, 10, 11 and 12. After the deletion of items, a subsequent PCA revealed only one component, with the least loading being .45. The second subscale (items 14 to 23) underwent a similar procedure, with items 14, 16, 17, 20, and 23 deleted. These items loaded poorly on the first factor, with the highest loading being .15. The poor loadings of the items observed may be partly attributed to the administration of the questionnaire in three different languages.

Combining the independently analyzed subscales in the PCA, there were three components with eigenvalues exceeding 1. Examination of the scree plot showed that there was a clear break after the third component. However, this was not supported by the results of Watkins' (2000) parallel analysis program. Parallel analysis showed only two components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (14 variables x 235 respondents). Therefore, a two-factor solution was forced.

The solution with two components explained 42.47% of the total, with component 1 contributing 25.52% while component 2 contributed 16.95%. The components were not related and so the Varimax rotation solution was performed to help interpret the two components. The rotated solution in Table 3.1 showed the presence of a simple structure, with both components revealing a number of strong loadings. Spiritual support is component 1 and spiritual openness is component 2. There was a very weak negative correlation between spiritual support and spiritual openness ($r = -.03$).

Table 3.1

Principal Components Analysis with Varimax Rotation of Two Factor Solution of SEI-R items

Item	Factor 1 Spiritual support	Factor 2 Spiritual openness
2. My faith gives my life meaning and purpose.	.73	
7. My faith helps me to confront tragedy and suffering.	.72	
5. My faith is an important part of my individual identity.	.69	
6. My relationship to God is experienced as unconditional love.	.67	
3. My faith is a way of life.	.66	
8. I gain spiritual strength by trusting in a higher power.	.65	
13. My faith guides my whole approach to life.	.53	
9. My faith is often a deeply emotional experience.	.48	
1. I often feel strongly related to a power greater than myself.	.45	
18. Learning from different faiths is an important part of my spiritual development.		.73
22. Persons of different faiths share a common spiritual bond.		.72
15. Ideas from faiths different from my own may increase my understanding of spiritual truth.		.70
19. I feel a strong spiritual bond with all humankind.		.68
21. My spiritual beliefs change as I encounter new ideas and experiences.		.58

Note: only factor loadings $\geq .40$ are displayed and in boldface.

Meaning in Life Questionnaire (MLQ; Steger et al., 2006)

Inspection of the correlation matrix showed that many of the coefficients were .30 and above.

The Kaiser-Meyer-Olkin value was .71 and the Bartlett's Test of Sphericity (Bartlett, 1954) was

significant, ($\chi^2(45) = 854.97, p < .001$). Principal components analysis showed that there were two components with eigenvalues over 1 explaining 57.12% of variance, with component 1 contributing 32% and component 2 contributing 24.58%.

Varimax rotation was performed to help interpret the two components. The rotation showed the presence of simple structure with both components showing a number of strong loadings with no overlap. The interpretation is consistent with the literature on meaning in life that the presence of meaning and the search for meaning are distinct constructs (Steger et al., 2006). Table 3.2 shows the loadings on the two components.

Table 3.2

Principal Components Analysis with Varimax Rotation of Two Factor Solution of MLQ items

Items	Factor 1 Search	Factor 2 Presence
8. I am seeking a purpose or mission for my life.	.85	
3. I am always looking to find my life's purpose.	.84	
7. I am searching for something that makes my life significant.	.82	
2. I am looking for something that makes my life feel meaningful.	.73	
10. I am searching for meaning in life.	.63	
4. My life has a clear sense of purpose.		.82
5. I have a good sense of what makes my life meaningful.		.79
6. I have discovered a satisfying life purpose.		.72
9. My life has no clear purpose.		.64
1. I understand my life's meaning.		.61

Note: only factor loadings $\geq .40$ are displayed and in boldface

The Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010)

The correlation matrix revealed that there were many coefficients more than .30. The Kaiser-Meyer-Olkin value was .88 and the Bartlett's Test of Sphericity reached significance, ($\chi^2 (66) = 1234.96.09, p < .001$). The data was therefore suitable for factor analysis. The principal components analysis revealed the presence of two components with eigenvalues exceeding 1 explaining 44.72% and 12.52% of variance respectively.

Oblimin rotation was performed to help interpret the two components because the two components were related. The rotation showed the presence of a structure with two components showing a number of strong loadings with most of the items loading substantially on one component. All the six positive affect items loaded strongly on only component 1 but only two negative affect items loaded just on component 2. The other four negative affect items loaded on both component 1 (negatively) and 2. There was a moderate negative correlation between the two factors ($r = -.33$). Although the PCA did not fully support the view that positive affect and negative affect are two separate dimensions of affective well-being, no item was deleted. The independence or bipolarity of affect is a contested issue among researchers (Bagozzi, Wong, & Yi, 1999).

Table 3.3

Principal Components Analysis with Oblimin Rotation of Three Factor solution of SPANE items

Item	Pattern coefficient		Structure coefficient	
	Positive affect	Negative affect	Positive affect	Negative affect
7. Happy	.90		.86	
3. Good	.88		.83	
10. Joyful	.78		.79	
5. Pleasant	.76		.75	
12. Contented	.70		.72	
1. Positive	.68		.68	
8. Sad	-.54	.42	-.68	.60
4. Bad	-.49	.37	-.62	.54
11. Angry		.76		.71
9. Afraid		.74		.71
6. Unpleasant	-.42	.53	-.60	.67
2. Negative	-.32	.53	-.49	.64

Note: only factor loadings $\geq .40$ are displayed and in boldface

Multi-Faith Religious Support Scale (MFRSS; Bjorck & Maslim, 2011)

The 14-item Multi-Faith Religious Support Scale underwent the same initial assessment of the data suitability for factor analysis. The correlation showed many coefficients above .30 and the Kaiser-Meyer-Olkin value was .93 and the Bartlett's Test of Sphericity was significant ($\chi^2(91) = 2116.20, p < .001$).

The principal components analysis revealed two components with eigenvalues greater than 1 explaining 54.93% and 7.60% variance respectively. The oblimin rotation performed showed the presence of cross loadings, with items loading strongly on the two components. Bjorck and Maslim (2011) found similar loadings when validating the measure among Muslim women. However, in that study items loaded stronger on their designated component and weaker on the

other component. In this study, the cross loadings did not follow this pattern. Since all the items appeared to be assessing almost the same thing, it was decided to delete a few items in order to use the measures as unidimensional. Items 1 and 2 were deleted. The principal components analysis showed the presence of 1 component thereafter. Hence, there was no need for the oblimin rotation (see appendix b).

Reliability of Measures

Reliability is a necessary condition for validity. It was measured by the use of internal consistency based on the entire sample. The internal consistency was also based on the items retained after the validation of the measures. In addition, the control variables which include social support and self-rated health have been included in Table 4 which shows the internal consistency of the various measures used in the study. The internal consistency ranged from .69 to .93. Values that are above .70 are considered acceptable (Pallant, 2011). There was only one value below .70.

Table 4

Internal consistency of measures used in the study

Measure	No. of items	α
Spiritual Experience Index (Revised)- Spiritual support subscale	9	.80
Spiritual Experience Index (Revised)- Spiritual openness subscale	5	.72
Meaning in Life Questionnaire- Presence of meaning subscale	5	.75
Meaning in Life Questionnaire- Search for meaning subscale	5	.84
Multi-Faith Religious Support Scale	12	.93
The Multidimensional Scale of Perceived Social Support	12	.90

Table 4 continued

Measure	No. of items	α
The Multidimensional Scale of Perceived Social Support- Friend subscale	4	.88
The Multidimensional Scale of Perceived Social Support- Family subscale	4	.91
The Multidimensional Scale of Perceived Social Support- Significant other	4	.80
The Scale of Positive and Negative Experience (SPANE)- Positive affect	6	.87
The Scale of Positive and Negative Experience (SPANE)- Negative affect	6	.78
The Scale of Satisfaction with Life	5	.80
The Life Orientation Test-Revised (LOT-R)	6	.69
Short-Form Health Survey (SF-12)	12	.82
The Wish to be Dead Scale	10	.92

Descriptive statistics

Descriptive statistics of the variables of interest based on the combined samples of rural and urban participants are presented in Table 5. Participants scored high on spirituality ($M = 47.8$, $SD = 4.86$) which had a possible range of 9 to 54. The participants also scored high on religious support ($M = 49.3$; $SD = 8.58$). The scores on the presence of meaning ($M = 28.0$, $SD = 5.60$) were higher than the scores on the search for meaning ($M = 24.1$, $SD = 8.15$). The participants scored higher on positive affect ($M = 21.3$, $SD = 4.98$) than negative affect ($M = 14.3$, $SD = 4.52$). Life satisfaction ($M = 25.6$, $SD = 5.72$) and composite subjective well-being ($M = 32.5$, $SD =$

= 12.2) scores were moderate. Optimism scores were high ($M = 22.9$, $SD = 3.98$). With a possible range of 10 to 60, the participant scored low on the wish to die ($M = 19.8$, $SD = 11.7$). The skewness and kurtosis values for subjective well-being were -.33 and -.37 respectively. This was within the acceptable limit of -2 and +2 (Field, 2009). The wish to die was not in the acceptable range, with skewness of 1.70 and kurtosis of 2.21 (see appendix d). The P-P plot showed that the data deviated significantly away from the diagonal line (appendix d). Therefore, the scores on the wish to die were log transformed. After the log transformation, the skewness and kurtosis became .85 and -.15 respectively.

Descriptive statistics of the main variables (N= 235)

Variable	<i>M</i>	<i>SD</i>	Min.	Max.	Skewness	Kurtosis
Spirituality	47.7	4.86	27.0	54.0	-1.57	3.07
Presence of meaning	28.0	5.60	7.00	35.0	-1.18	1.61
Search for meaning	24.1	8.15	5.00	35.0	-.94	-.11
Religious support	49.3	8.58	17.0	60.0	-1.21	1.53
Positive affect	21.3	4.98	10.0	30.0	-.34	-.62
Negative affect	14.3	4.52	6.00	28.0	.15	-.49
Life satisfaction	25.6	5.72	6.00	35.0	-.82	.37
Wish to die	1.24	.21	1.00	1.77	.85	-.15
Optimism	22.9	3.98	9.00	30.0	-.33	-.16
Subjective well-being	32.5	12.2	-1.00	59.0	-.33	-.37

Correlation

In Table 6, the correlation matrix is presented. Basically, it shows the relationships among the variables of interest. The independent variables were mostly significantly correlated with the dependent variables. Spirituality was correlated with subjective well-being ($r = .33, p < .001$) and the wish to die ($r = -.22, p = .00$). Religious support was correlated with subjective well-being ($r = .34, p < .001$). The only non-significant correlation was between religious support and the wish to die ($r = -.07, p = .31$). Spirituality and religious support were significantly correlated with the presence of meaning ($r = .45, p < .001$; $r = .26, p < .001$, respectively) and optimism ($r = .25, p < .001$; $r = .21, p = .00$, respectively). The presence of meaning was correlated with subjective well-being ($r = .56, p < .001$) and the wish to die ($r = -.37, p < .001$). Optimism was also correlated with subjective well-being ($r = .32, p < .001$) and the wish to die ($r = -.34, p < .001$).

Table 6

Pearson correlation among the variables of interest

	1	2	3	4	5	6	7	8	9
1. SEI-R-SS									
2. MLQ-P	.45***								
3. MFRSS	.35***	.26***							
4. SPANE-P	.25***	.43***	.33***						
5. SPANE-N	-.20***	-.36***	-.23***	-.58***					
6. SWLS	.32***	.53***	.26***	.49***	-.32***				
7. WTBD	-.22**	-.37***	-.07	-.32***	.39***	-.22**			
8. LOT-R	.25***	.29***	.21**	.26***	-.34***	.20**	-.34***		
9. SWB	.33***	.56***	.34***	.85***	-.76***	.79***	-.38***	.32***	

Note: SEI-R-SS = spirituality; MLQ-P = presence of meaning; MFRSS = religious support; SPANE-P = positive affect; SPANE-N = negative affect; SWLS = life satisfaction; WTBD = wish to die; LOT-R = optimism; SWB = subjective well-being

* $p < .05$; ** $p < .01$; *** $p < .001$.

H1: Rural residents will score lower on well-being than urban residents.

H1a: Rural residents will score lower on subjective well-being than urban residents.

H1b: Rural residents will score higher on the wish to die than urban residents.

Independent-samples t-test was performed to ascertain differences in well-being between rural and urban samples. The assumptions of independence of observation and normality were met. Additionally, the dependent variables were measured on at least the interval scale. The assumption concerning the homogeneity of variance was violated. However, SPSS provides alternative t-value in this kind of situation.

Table 7

Differences in subjective well-being between rural and urban residents

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>	η^2	95% CI	
								<i>LL</i>	<i>UL</i>
Rural	120	30.2	11.0	234	-2.95	.00	.04	-7.7	-1.5
Urban	115	34.9	12.9						

Note: CI = confidence level; *LL* = lower limit; *UL* = upper limit

Table 7 shows that there was a significant difference in the subjective well-being scores for rural residents ($M = 30.2$, $SD = 11.0$) and urban residents ($M = 34.9$, $SD = 12.9$; $t(234) = -2.95$, $p = .00$, one-tailed). The magnitude of the differences in the means (mean differences = -4.6 , 95% CI $[-7.7, -1.5]$) was small ($\eta^2 = .04$). Thus, supporting hypothesis 1a.

Table 8

Differences in the wish to die between rural and urban residents

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>	η^2	95% CI	
								<i>LL</i>	<i>UL</i>
Rural	120	1.3	.24	215	3.87	< .001	.05	.05	.16
Urban	115	1.2	.17						

Note: CI = confidence level; *LL* = lower limit; *UL* = upper limit

The hypothesis that rural residents will score higher on the wish to die than urban residents was also supported as can be seen from Table 8. There was a significant difference in the wish to die scores for rural residents ($M = 1.3$, $SD = .24$) and urban residents ($M = 1.2$, $SD = .17$; $t(215) = 3.87$, $p < .001$, one-tailed). The magnitude of the differences in the means (mean differences = 0.1, 95% CI [0.1, 0.2]) was small ($\eta^2 = .05$).

Preliminary assumptions for multiple regression analysis

Preliminary analyses were conducted to ascertain whether the assumptions underlying regression analyses were violated or not. There are two criterion variables and so two different preliminary analyses were run for them. With regards to subjective well-being, there were no serious issues with outliers. There were two cases that had standardized residual values above -3. However, when the Cook's Distance value was checked it was .05, which suggests that there were no major problem as per Tabachnick and Fidell's (2007) recommendation which states that values larger than 1 are a potential problem. Therefore, the cases did not have undue influence on the model. Outliers were no longer an issue after the scores on the wish to die were log transformed. There was no case with residual above 3.

Inspection of the histograms revealed that subjective well-being and the wish to die scores were roughly normally distributed with a little deviation. The scatterplots also showed a roughly rectangular distribution of residuals and a piled up in the centre (along the 0 point) of the plot. The P-P plots of the regression residuals showed that the data was mostly on the diagonal line for both subjective well-being and the wish to die (see appendix G). There were no multicollinearity problems as the tolerance approached 1 for both subjective well-being and the wish to die. The Variance Inflation Factor (VIF) for subjective well-being and the wish to die were also less than 10 but greater than 1. There was no violation of the assumption about the independence of errors. The Durbin-Watson values were 1.80 and 1.82 for subjective well-being and the wish to die respectively. When the value is close to 2 then the assumption about the independence of errors is met (Field, 2009).

Multiple regression analyses

A multiple regression was conducted to ascertain the effects of the independent variables beyond the control variables before proceeding to the mediation analyses even though there was no hypothesis stated for it. The control variables are the variables that feature prominently in ageing research in Ghana and they include social support and health.

Multiple regression analysis was conducted in three steps, with control variables in step 1, independent variables in step 2 and mediating variables in step 3. For subjective well-being as displayed in Table 9, the first step was significant, explaining 47% of the variance, $F(7, 227) = 28.56, p < .001$. Age, sex and place of residence did not make unique contribution but physical health ($\beta = .17, p = .00$), mental health ($\beta = .54, p < .001$), and social support ($\beta = .22, p < .001$) did. After entering the independent variables, an additional variance of 4% was explained, $\Delta F(2, 225) = 9.70, p < .001$. Spirituality ($\beta = .16, p = .00$) made significant contribution in explaining

the variance in subjective well-being whereas religious support made a marginally non-significant contribution ($\beta = .10, p = .05$). Sex became a significant contributor in this step ($\beta = -.10, p = .03$); females had lower levels of subjective well-being than males. Physical health ($\beta = .15, p = .00$), mental health ($\beta = .50, p < .001$), and social support ($\beta = .18, p = .00$) were still significant predictors. In the third step, an additional variance of 6% was explained, $\Delta F(2, 223) = 16.60, p < .001$. The presence of meaning ($\beta = .24, p < .001$) and optimism ($\beta = .16, p = .00$) made unique contributions in explaining the variance in subjective well-being. Religious support was statistically non-significant ($\beta = .07, p = .19$) and spirituality also became statistically non-significant ($\beta = .05, p = .34$). The previously significant control - physical health ($\beta = .11, p = .03$), mental health ($\beta = .42, p < .001$) and social support ($\beta = .18$) - variables still significantly explained the variance in subjective well-being for older people.

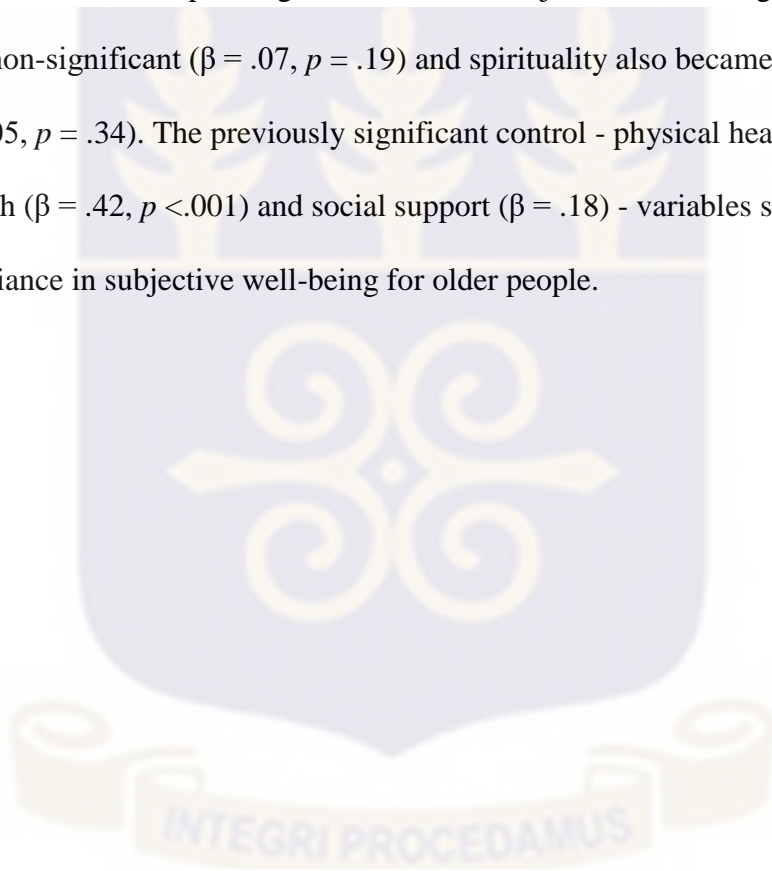


Table 9

Hierarchical Multiple Regression Analysis of predictors of subjective well-being (N= 235)

Predictor	Model 1			Model 2			Model 3		
	β	t	p	β	t	p	β	t	p
Sex									
Female	-.08	-1.72	.09	-.10	-2.15	.03	-.08	-1.73	.08
Male (RC)									
Age									
60-74	-.04	-.44	.66	-.02	-.25	.80	-.06	-.80	.42
75-84	.04	.50	.62	.04	.54	.59	.00	.00	1.0
85 and above (RC)									
Place of residence									
Urban	-.01	-.24	.81	-.02	-.30	.77	-.05	-1.09	.28
Rural (RC)									
Physical Health	.17	3.10	.00	.15	2.85	.01	.11	2.21	.03
Mental Health	.54	10.1	<.001	.50	9.34	<.001	.42	8.17	<.001
Social support	.22	4.37	<.001	.18	3.50	.00	.18	3.64	.00
Religious support				.10	1.95	.05	.07	1.33	.19
Spirituality				.16	3.12	.00	.05	.95	.34
Presence of meaning							.24	4.25	<.001
Optimism							.16	3.15	.00
<i>F</i>		28.56	<.001		26.07	<.001		27.31	<.001
<i>R</i> ²		.47			.51			.57	
ΔF					9.70	<.001		16.60	<.001
ΔR^2					.04			.06	

Note: RC = Reference category; boldface = significant p value.

With respect to the wish to die, 26% of the variance was explained by the control variables, $F(7, 227) = 11.60, p < .001$. The oldest-old had greater wish to die compared the young-old ($\beta = -.40, p < .001$) and old-old ($\beta = -.32, p = .00$). Mental health also made a unique contribution ($\beta = -.32, p < .001$). When religious support and spirituality were entered in step 2, an additional variance of 2% was explained, $\Delta F(2, 225) = 3.08, p = .05$. Religious support did not make a statistically

significant contribution but spirituality did ($\beta = -.15, p = .02$). The third step explained additional 4% of the variance, $\Delta F(2, 223) = 7.53, p = .00$. The presence of meaning and optimism were associated with the wish to die ($\beta = -.16, p = .03$; $\beta = -.17, p = .00$, respectively). Spirituality became statistically non-significant ($\beta = -.07, p = .30$).

Table 10

Hierarchical Multiple Regression Analysis of predictors of the wish to die (N = 235)

Predictor	Model 1			Model 2			Model 3		
	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Sex									
Female	.11	1.85	.07	.12	2.09	.04	.11	1.90	.06
Male (RC)									
Age									
60-74	-.40	-3.95	< .001	-.38	-3.80	< .001	-.34	-3.36	.00
75-84	-.32	-3.18	.00	-.31	-3.20	.00	-.27	-2.77	.01
85 and above (RC)									
Place of residence									
Urban	-.04	-.60	.55	-.04	-.56	.58	-.00	-.05	.96
Rural (RC)									
Physical Health	-.11	-1.78	.08	-.11	-1.73	.09	-.08	-1.20	.23
Mental Health	-.32	-5.07	< .001	-.30	-4.66	< .001	-.24	-3.77	< .001
Social support	.08	1.33	.18	.09	1.46	.15	.08	1.22	.22
Religious support				.02	.36	.72	.06	.94	.35
Spirituality				-.15	-2.44	.02	-.07	-1.03	.30
Presence of meaning							-.16	-2.25	.03
Optimism							-.17	-2.75	.00
<i>F</i>		11.60	< .001		9.90	< .001		9.92	< .001
<i>R</i> ²		.26			.28			.33	
ΔF					3.08	.05		7.53	.00
ΔR ²					.02			.05	

Note: RC = Reference category; boldface = significant *p* value.

Mediation analysis

Baron and Kenny (1986) proposed three steps for establishing mediation. First, the independent variable should account for a significant variance in the mediator. Second, the independent variable should account for a significant variance in the dependent variable. Third, the mediator must account for significant variance in the dependent variable. If all these conditions are met, the relationship between the independent and the dependent variable must be less than it was when it was examined in the second condition. A full mediation is established when the independent variable no longer has a significant relationship with the dependent variable when the mediator is controlled.

A number of regression analyses were conducted to ascertain the mediating roles of the presence of meaning and optimism in the hypothesized relationships. Andrew Hayes' (2013) process modeling tool (version 2.16.1) was used for its Sobel's test of significance.

Table 11

Meaning as a mediator in Spirituality-Subjective Well-being and Spirituality-Wish to die relationships

	Subjective well-being			Wish to die		
	Criterion	<i>t</i>	β	Criterion	<i>t</i>	β
Model 1						
Spirituality	SWB	5.24	.33***	Wish to die	-3.44	-.22**
Model 2						
Spirituality	Presence of meaning	7.62	.45***	Presence of meaning	7.62	.45***
Model 3						
Spirituality	SWB	1.54	.09	Wish to die	-1.03	-.07
Presence of meaning		8.55	.52***			-.34***

Note: SWB = Subjective well-being, ** $p < .01$; *** $p < .001$.

H2a: *The presence of meaning will mediate the relationship between spirituality and subjective well-being.*

Table 11 shows that spirituality predicted SWB ($\beta = .33, p < .001$), and the presence of meaning ($\beta = .45, p < .001$). When spirituality and the presence of meaning were included in the third model, the presence meaning predicted SWB ($\beta = .52, p < .001$), but the relationship between spirituality and SWB became statistically non-significant ($\beta = .15, p = .09$). A Sobel test confirmed that the full mediation of the presence of meaning in the relationship between spirituality and SWB ($z = 5.67, p < .001$). Thus, the hypothesis was supported.

H2b: *The presence of meaning will mediate the relationship between spirituality and the wish to die.*

Table 11 shows that spirituality predicted the wish to die ($\beta = -.22, p = .00$), and the presence of meaning ($\beta = .45, p < .001$). When spirituality and the presence of meaning were entered in the same model the relationship between spirituality and the wish to die became non-significant ($\beta = -.07, p = .31$), but the presence of meaning significantly predicted the wish to die ($\beta = .34, p < .001$). A Sobel test confirmed that the relationship between spirituality and the wish to die was fully mediated by the presence of meaning ($z = -4.08, p < .001$). The hypothesis was supported.

Table 12

Optimism as a mediator in Spirituality-Subjective Well-being and Spirituality-Wish to die relationships

	Subjective well-being			Wish to die		
	Criterion	<i>t</i>	β	Criterion	<i>t</i>	β
Model 1						
Spirituality	SWB	5.24	.33***	Wish to die	-3.44	-.22**
Model 2						
Spirituality	Optimism	3.92	.25***	Optimism	3.92	.25***
Model 3						
Spirituality	SWB	4.21	.26***	Wish to die	-2.29	-.14*
Optimism		4.18	.26***		-4.84	-.31***

Note: SWB = Subjective well-being, ** $p < .01$; *** $p < .001$

H3a: *Optimism will mediate the relationship between spirituality and subjective well-being.*

As can be seen in Table 12 spirituality predicted SWB ($\beta = .33, p < .001$) and optimism ($\beta = .25, p < .001$). When spirituality and optimism were entered in model 3 spirituality remained a significant predictor of SWB but the relationship decreased ($\beta = .26, p < .001$), and optimism predicted SWB ($\beta = .26, p < .001$). A Sobel test confirmed that optimism partially mediated the relationship between spirituality and SWB ($z = 2.81, p = .01$). Thus, the hypothesis was supported.

H3b: *Optimism will mediate the relationship between spirituality and the wish to die.*

Table 12 shows that when spirituality predicted the wish to die ($\beta = -.22, p = .00$). When spirituality and optimism were entered in the same model, spirituality still predicted the wish to die even though the relationship was reduced ($\beta = -.14, p = .02$). The relationship between optimism and the wish to die was significant ($\beta = -.31, p < .001$). The Sobel test performed confirmed that optimism partially mediated the relationship between spirituality and the wish to die ($z = -3.00, p = .00$). Therefore, the hypothesis was supported.

Table 13

Meaning as a Mediator in Religious support-Subjective Well-being and Religious support-Wish to die relationship

	Subjective well-being			Wish to die		
	Criterion	<i>t</i>	β	Criterion	<i>t</i>	β
Model 1						
Religious support	SWB	5.53	.34***	Wish to die	-1.02	-.07
Model 2						
Religious support	Presence of meaning	4.16	.26***	Presence of meaning	4.16	.26***
Model 3						
Religious support	SWB	3.80	.21***	Wish to die	.51	.03
Presence of meaning		9.22	.51***		-5.93	-.38***

Note: SWB = Subjective well-being, ** $p < .01$; *** $p < .001$.

H4a: *The presence of meaning will mediate the relationship between religious support and subjective well-being.*

Table 13 shows that religious support predicted SWB ($\beta = .34, p < .001$) as well as the presence of meaning ($\beta = .25, p < .001$). With both religious support and presence of meaning in the third model, religious support remained a significant predictor of SWB but the relationship decreased ($\beta = .21, p < .001$). The presence of meaning was also significantly related to SWB ($\beta = .51, p < .001$). A Sobel test confirmed the partial mediation of the presence of meaning and thus supporting the hypothesis ($z = 3.77, p < .001$).

H4b: *The presence of meaning will mediate the relationship between religious support and the wish to die.*

There was no significant relationship between religious support and the wish to die ($\beta = .00, p = .07$) and therefore the condition for mediation as per Baron and Kenny (1986) was not met. The hypothesis was therefore not supported.

Table 14

Optimism as a Mediator in Religious support-Subjective Well-being and Religious support-Wish to die relationship

	Subjective well-being			Wish to die		
	Criterion	<i>t</i>	β	Criterion	<i>t</i>	β
Model 1						
Religious support	SWB	5.53	.34***	Wish to die	-1.02	-.07
Model 2						
Religious support	Optimism	3.21	.21**	Optimism	3.21	.21**
Model 3						
Religious support	SWB	4.72	.29***	Wish to die	.06	.00
Optimism		4.36	.26***		-5.41	-.34***

Note: SWB = Subjective well-being, ** $p < .01$; *** $p < .001$.

H5a: *Optimism will mediate the relationship between religious support and subjective well-being.*

Religious support was positively associated with SWB ($\beta = .34, p < .001$) and optimism ($\beta = .21, p = .00$). When religious support and optimism were entered in the same model, religious support remained significantly related to SWB but the relationship reduced ($\beta = .29, p < .001$). Optimism was also significantly associated with SWB ($\beta = .26, p < .001$). A Sobel test confirmed the partial mediation of optimism for the relationship between religious support and SWB ($z = 2.54, p = .01$). The hypothesis was supported.

H5b: *Optimism will mediate the relationship between religious support and the wish to die.*

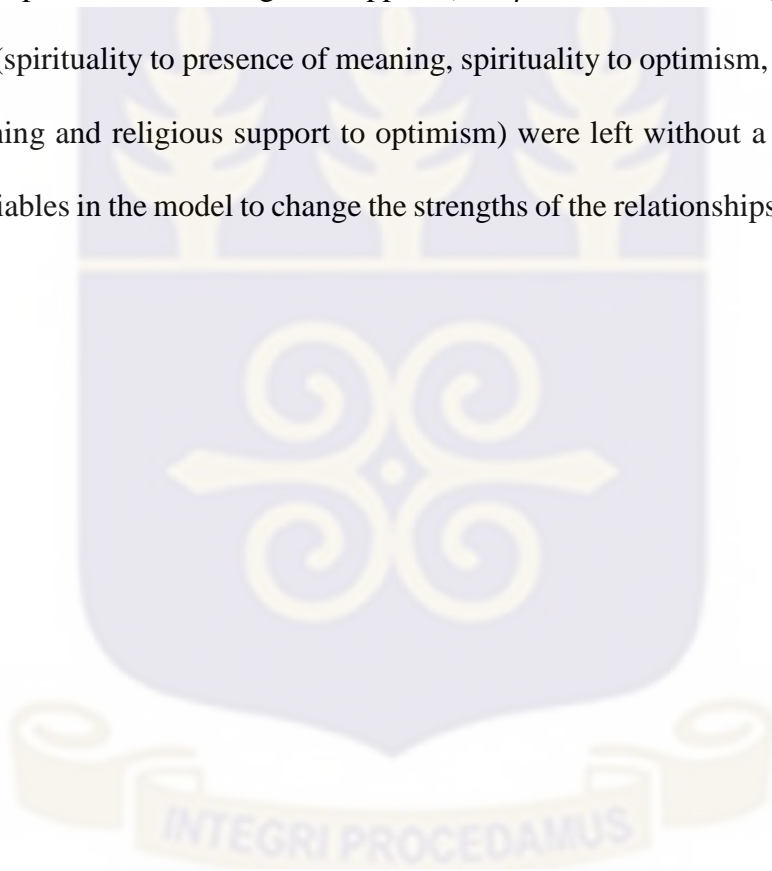
This hypothesis was not supported since the initial condition of religious support significantly accounting for variance in the wish to die was not met.

Summary of findings

Overall, rural residents scored lower on well-being than their urban counterparts. Rural residents scored lower levels of subjective well-being and higher levels of the wish to die than urban residents. The effect sizes of these differences were small.

The presence of meaning was a stronger mediator than optimism. The presence of meaning fully mediated the relationship between spirituality and subjective well-being as well as the relationship between spirituality and the wish to die. Optimism on the other hand partially mediated these relationships. For the relationship between religious support and subjective well-being, both the presence of meaning and optimism partially mediated the relationship. There was no mediation for the relationship between religious support and the wish to die for either the presence of meaning or optimism.

It is important to note that for ease of comprehension of the strengths of the relationships in the observed model, labels were added to the beta values. For example, the strength of the relationship between spirituality (SP) and subjective well-being (SWB) is non-significant when the presence of meaning (PM) is the mediator ($\beta = .09$, SPMSWB) but significant when optimism (O) is the mediator ($\beta = .26$, SOSWB). Another example is that the strength of the relationship between optimism and the wish to die (WTD) is slightly different when spirituality is in the model ($\beta = -.31$, SOWTD) compared to when religious support (RS; $\beta = -.34$, RSOWTD). However, four of the relationships (spirituality to presence of meaning, spirituality to optimism, religious support to presence of meaning and religious support to optimism) were left without a label because there were no other variables in the model to change the strengths of the relationships with the dependent variables.



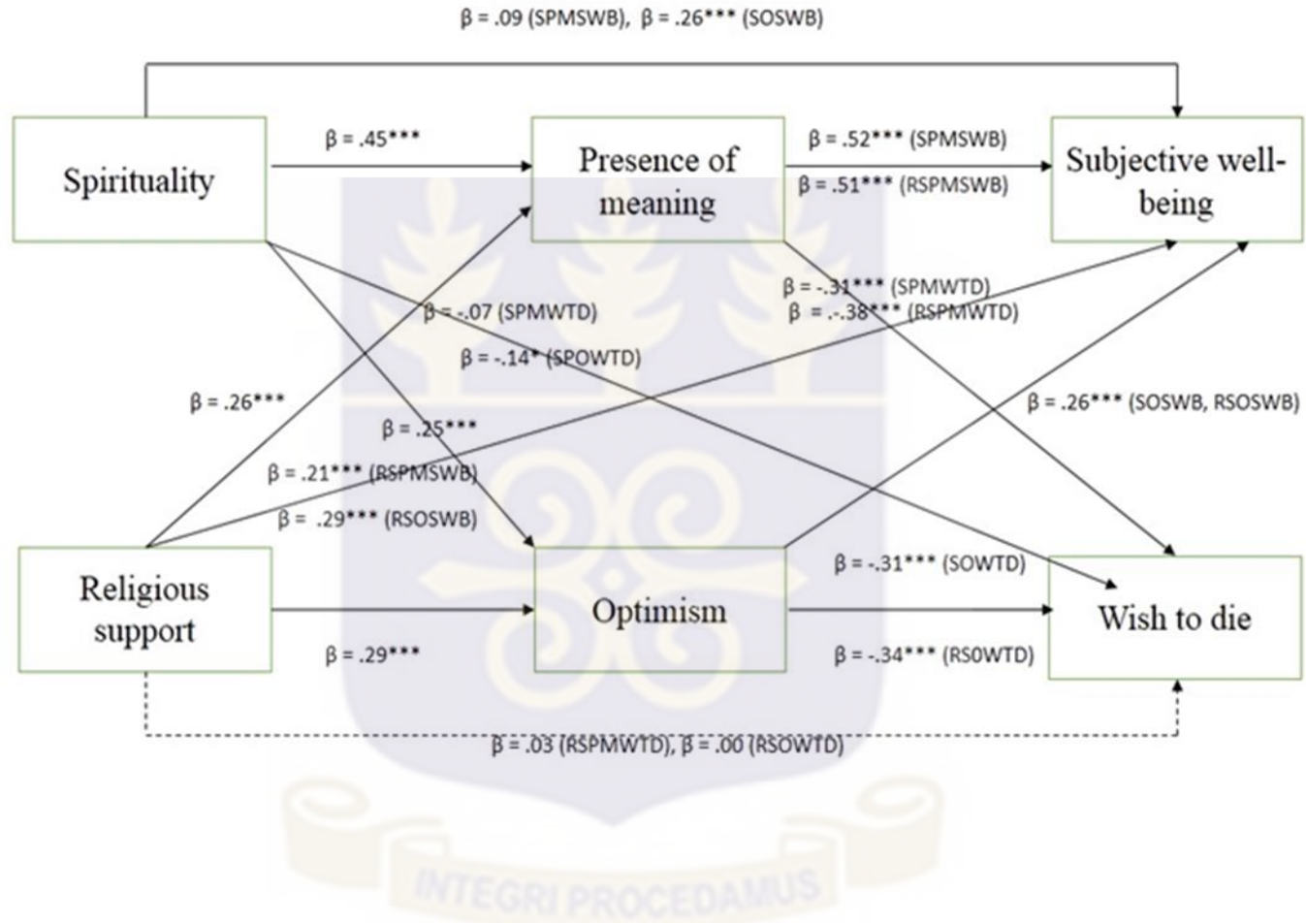


Figure 2: Observed model

CHAPTER FIVE

DISCUSSION

This chapter discusses the findings of the study. The results are discussed with reference to the theoretical underpinnings of the study as well as the findings from related empirical studies. The chapter also highlights the contributions made by the study in the religion/spirituality, ageing and well-being literature as well as its practical implications. The limitations of the study have also been discussed together with recommendations for future studies. The chapter is concluded with a summary of key areas of the entire study.

The results of the study are discussed in accordance with the formulated and tested hypotheses. The first part of the section focuses on the hypotheses on rural-urban differences in well-being. The second part of the section focuses on the hypotheses on the mediating roles of the presence of meaning and optimism in the relationships among spirituality, religious support and the well-being indicators.

Rural-urban comparison on well-being

It was hypothesized that older rural residents will score lower on subjective well-being than older urban residents. In addition, it was hypothesized that rural residents will score higher on the wish to die than urban residents. The results supported the hypotheses. The results are in line with the argument that in developing countries where there persist marked differences in conditions of living in rural and urban settings, those in the urban setting where there are better facilities and infrastructure are more likely to report higher levels of well-being than their rural counterparts. Generally, poverty and underdevelopment are characteristics of rural areas in Ghana, reflected in low income levels, poor nutrition and housing (Mba, 2002). In this study, older rural residents

reported lower incomes than their urban counterparts. Subsequently, although there are two clinics in the rural setting their capacity is markedly limited than the urban setting which has big hospitals. It is not uncommon for cases to be referred from Matse and Taviefe to hospitals in Ho, the capital of the Volta Region. These factors and many others may affect conditions of living and thus result in the differences in well-being found in the study.

The result is consistent with studies that have used very large samples. Raquena (2016) used data from the sixth European Social Survey from 29 countries and found that in developing countries urban residence was more favourable than rural residence when the scores of residents on subjective well-being were compared. Easterlin, Angelescu, and Zweig (2011) also reported that life satisfaction was associated with urban residence than rural residence in lowly developed 8countries with less than \$23,000 per capita GDP. This relationship was recorded among people in Asia, Africa and Latin America.

Meaning in life as a mediator

The present study offers an understanding about the pathways that link spirituality and religious support to the well-being of older people. The results showed that the presence of meaning was an explanatory pathway for the relationships between spirituality, subjective well-being and the wish to die. The findings to a large extent replicate the results from other studies. Cowlshaw et al. (2013) for instance found that the meaningfulness dimension of Antonovsky's sense of coherence mediated the relationship between spirituality and life satisfaction over time. Precisely, spirituality was associated with increased levels of meaningfulness which in turn was associated with relative increases in life satisfaction.

In the present study, spirituality was positively associated with subjective well-being and negatively associated with the wish to die. The direct relationships found are consistent with the

predictions of the religious coping theory that positive forms of religious coping yield positive mental health outcomes (Pargament et al., 1998). This is consistent with the findings of Hamren, Chungkham, and Hyde (2015) who found that religiosity/spirituality predicted the quality of life of older Ethiopians. Pokimica, Addai, and Takyi (2012) also found that religious importance and affiliation were significantly associated with subjective well-being among Ghanaians.

The relationship between spirituality and well-being became statistically non-significant when the presence of meaning in life was included in the regression model, implying a full mediation. Spirituality was associated with increased levels of the presence of meaning which in turn was associated with increase in subjective well-being and decrease in the wish to die.

The results support the view that religion/spirituality plays a key role in imbuing life with meaning and purpose (Pargament, Koenig, & Perez, 2000). Spirituality is an important source of meaning in late life considering that older people may be experiencing that their sources of meaning are diminishing (Koenig, 2006). From Park and Folkman's (1997) meaning making model, spirituality informs two dimensions of global meaning, which includes order and purpose. With respect to order dimension, spirituality influences the beliefs people hold about themselves. Religion/spirituality is a core aspect of individuals' identities. It is central in the lives of Ghanaians (Pokimica, Addai, & Takyi, 2012). When samples of 396 university students and 608 selected individuals from three urban settings in Ghana were asked about what they considered important in how they perceived themselves, most of them said religion (Langer, 2010). Religion was a more important part of their identity than ethnicity and gender (Langer, 2010). This was the case for both Christian and Muslim respondents.

Religion/spirituality influences self-worth or personal significance of people (Pargament, 1997). It offers meaning and significance to the lives of Ghanaians, in the physical world and the world

beyond the physical (Adams, 2000; Opoku, 1978). Reiss (2004) also asserted that religious beliefs have the potential to influence the self-worth of individuals. Citing the example of Jesus dying to atone for the sins of humanity, Reiss (2004) reasoned that this may increase the feelings of self-worth in the minds of the faithful. By extension, older people who are spiritual or have a sense of connection with God or a higher power are more likely to believe that their lives are important and significant. Sedikides and Gebauer's (2010) meta-analysis, for instance, showed that intrinsic religiousness was instrumental in self-enhancement- seeing oneself favorably.

Moreover, religion/spirituality may play a key role in the life purposes of older people. Purpose is typically framed in terms of goals (Park & Folkman, 1997). Emmon, Cheung, and Tehrani's (1998) personal goal approach to spirituality may help to understand the role of spirituality in informing the goals or purposes of individuals. Emmons (2005) posited that all goals are not equal in terms of their contributions to well-being. Spiritual strivings which refer to goals that are connected to the sacred is consistently associated with well-being (Emmons, 2005). Spiritual strivings are concerned with matters of ultimate purpose, connection and commitment to the sacred or God, and a search for the sacred in everyday life (Emmons, 2005).

Old age may be adaptive to achieving spiritual growth (Atchley, 1997; McFadden, 1999). Atchley (1997) posited that ageing raises the awareness of spiritual needs, which in turn may influence spiritual development. He reasoned that physical, psychological and social ageing are conducive for spiritual development. Ageing is accompanied by the capacity to be internally quiet, something younger people may struggle to attain (Atchley, 1997). Additionally, the increase in introspection and loss of social roles opens the door for spiritual activities such as meditation and prayers, which may lead to spiritual growth.

Emmons (2005) argued that spiritual strivings may be empowering in the sense that individuals are more likely to persevere in their spiritual strivings even in the face of difficult circumstances. This is particularly evident among the disadvantaged in society like racial minorities and older people (Pargament, 1997). The literature on ageing in Ghana reveals a number of problems which includes poor health and financial difficulties that may challenge feelings of purposefulness among older people (Ayernor, 2012; Mba, 2004). Thus, spiritual strivings present opportunities for older Ghanaians to feel that their lives are purposeful.

As was expected there was a positive relationship between the presence of meaning in the lives of older people and subjective well-being. There was also a negative relationship between the presence of meaning and the wish to die. These results were consistent with other studies in the meaning in life literature. For example, Battersby and Phillip (2016) found that the presence of meaning was positively related to life satisfaction and positive affect for older Australians. The presence of meaning was also negatively related to negative affect. With respect to meaning derived from religion, Krause (2003) used a large sample of 1500 older participants (748 Blacks and 752 Whites) and found that religious meaning was positively associated with life satisfaction, self-esteem and optimism.

The result is also consistent with the literature on the wish to die and suicide-related concepts. The review of clinical studies on the wish to die and the wish to hasten death by Monforte-Royo and her colleagues (2011) revealed that meaninglessness was often cited among the reasons for the wish. The narratives from van der Geest's (2001) study on older Ghanaians in Kwahu also stressed the importance of meaning and purpose. Most of the older people who wished to die said they were tired of living, suggesting loss of purpose in life.

The works of developmental theorists such as Erikson (1977) and Tornstam (2005) illuminate the importance of meaning in late adulthood. In the eighth stage of Erikson's (1977) psychosocial development theory, older people are faced with the developmental task of "integrity versus despair". This is a stage of deep introspection where older people review their lives and attempt to make meaning of their lives, whether their life accomplishments met what they sought out to do or not. Obviously, no human being can achieve everything he or she sets out to do but those who are able to reconcile the inevitable gap see their lives as significant and purposeful and are satisfied with their lives. Such individuals are less likely to wish to die as the results of this study and other studies have shown (e.g. Heisel, Neufeld, & Flett, 2016). On the contrary, individuals who fail to resolve the developmental task successfully have their lives riddled with despair, manifested in the feeling that time is too short to start another life and try another route to achieving integrity (Erikson, 1977).

The results also showed that the relationship between religious support and subjective well-being was partially mediated by the presence of meaning in life. Greater perception of care and availability of support from religious leaders and participants imbued life with meaning which in turn contributed to greater happiness or subjective well-being of older people.

Theorists recognize that humans have a fundamental need to belong or form social relationships (Ainsworth, 1989; Baumeister & Leary, 1995). Congregations or religious communities give individuals sense of belongingness when they are caring and welcoming (Krause, 2008). Churches in Ghana, for example, are now the main providers of the social belongingness, besides the family (van der Geest, 2004).

Researchers have noted that sense of belongingness is a primary source of meaning in life (Lambert et al., 2013; Stillman & Baumeister, 2009). Lambert et al. (2013) found that individuals who

reported greater sense of belongingness found their lives to be meaningful. The relationship was not due to fleeting moods. Rather, the effect of the sense of belonging endured over three weeks. Moreover, although positive mood or affect is important in meaning in life judgment, thinking about social connections may help individuals who are low in positive affect to have improved sense of meaning in life (Hick & King, 2009).

The feeling that one is excluded from his or her religious group or community may impinge on meaning in life (Stillman & Baumeister, 2009). For example, Stillman et al. (2009) found that when social exclusion was experimentally manipulated, participants in the social exclusion group reported that their lives were less meaningful.

The impact of religious support on meaning and significance in life in old age is accentuated when placed in the context of Ghanaian funerals. The ultimate show of respect to an older person is to organize a befitting funeral when he or she dies (van der Geest, 1997). It represents a public show of respect, one that cannot be hidden from the glare of the public. Although older people criticize the preoccupation with funerals at the expense of the provision of care when they are alive, they would rather not have poor funerals (van der Geest, 2000). In today's Ghana, faith communities play integral roles in funerals. Whether a funeral is prestigious or not may depend on faith communities (van der Geest, 2004). For instance, some churches have social and religious facilities that help to raise the status of funerals and in turn increase the respect for the deceased and his or her family (van der Geest, 2004). An overflow of attendants to funeral church service is indicative of a prestigious funeral (van der Geest, 2004). The vital contributions of the faith communities in successful funerals hinge to a large extent on the relationship older people have with them- and sometimes the payment of dues is important (van der Geest, 2004). Therefore, the perception of a

supportive religious group more or less guarantees a good funeral in the minds of older people and this can help them feel good in life.

Contrary to what was expected, religious support was not significantly associated with the wish to die. Social resources were not important in predicting the wish to die as secular social support was neither associated with the wish to die. Although some studies have found the lack of social support as one of the factors responsible for the wish to die (e.g. Kelly et al., 2002), what appears prominently in terms of social reasons for the wish to die is the feeling of being a burden to others (e.g. Chochinov et al., 2005; Monforte-Royo et al., 2011; Ohnsorge, Gudat, & Rehmann-Sutter, 2014; van der Geest, 2001). This is more psychological than social. The feeling of being a burden is closely related to the lack of autonomy and it affects personal and social development (Monforte-Royo et al., 2011). Religious support may have served as a social or external coping mechanism instead of as a psychological coping mechanism for the older people.

Moreover, some studies have reported no significant association between religious support and suicide ideation and other related concepts such as depression (e.g. Chatters et al., 2011; Lee, 2011). Chatters et al. (2011), for instance, found that church-based emotional support and negative interaction with church members were not significantly associated with suicide ideation among a sample of African American and Black Caribbean adults. Lee (2011) also found that among 143 older adults, neither religious support nor social support was significantly associated with any of the well-being indicators which included anxiety and depression. However, spirituality was significantly associated with anxiety, positive well-being and vitality. Similarly, the results of this study showed that spirituality, presence of meaning in life and optimism were all significantly associated with the wish to die.

Optimism as a mediator

The results of the study also showed that optimism was another explanatory link between spirituality and well-being of older people. Optimism partially mediated the relationships between spirituality and the well-being indicators. Greater spirituality was associated with increase in optimism which in turn was associated with increase in subjective well-being and decrease in the wish to die.

As Pargament, Feuille, and Burdzy (2011) have noted, various forms of religious coping may serve several functions including contributing to the sense of confidence and optimism of individuals. The relationship between spirituality and optimism can also be further explained via the Kirkpatrick's (1992) extension of the attachment theory. The sense of the presence of God or a higher power enables individuals to explore their environments with poised confidence and calmness even in the midst of tempest (Kirkpatrick, 1992). Those in a close relationship with God or a higher power believe that God is a haven of safety that they can turn to in distress times. Unlike human attachment figures, God is perceived as always available to protect and comfort believers in distress times (Kirkpatrick, 2012). God is a source of hope and optimism in these times and in the future (Sim & Loh, 2003).

God as a haven of safety is profoundly reflected in the lives of Ghanaians. In distress times Ghanaians search for solutions from God through prayers and also religious figures who are thought to be intermediaries (Asamoah-Gyedu, 2005; Meyer, 1995). Pentecostal churches have been instrumental in this regard by providing believers with protection against physical problems through spiritual interventions (Asamoah-Gyedu, 2005; Meyer, 1995). There is a permeable boundary between what is physical and spiritual in Ghana (Asamoah-Gyedu, 2005). Physical problems are manifestations of underlying problems in the spiritual realm (Asamoah-Gyedu,

2005). For example, Apt (2013) reported that older people in rural Ghana sought spiritual healing in addition to herbs and self-medication in coping with their health problems.

Various studies have confirmed the association between a close relationship with God and optimism. For instance, when older people believe that their problems can be overcome through working closely with God it results in increase in optimism (Krause & Hayward, 2014). Ai et al. (2004) found that prayer, an important religious practice for establishing connection with God, mediated the relationship between religious faith and optimism as well as hope among middle-aged and older patients. Among orphaned Ghanaians, religion/spirituality promoted hope and optimism in the face of stressful conditions in the orphanage (Yendork & Somhlaba, 2016).

Older people who hold positive attitudes such as hope and optimism are more likely to enjoy better mental health outcomes (Ferguson & Goodwin, 2010; Ju et al., 2013). When individuals encounter problems in life their emotions range from negative to positive. The balance in their emotions is related to optimism (Scheier & Carver, 1993). Optimists tend to expect that things will turn out good for them, even when it is difficult. This positive attitude yields a more positive mix of emotions than pessimists who expect the worst outcomes (Carver, Scheier, & Segerstrom, 2010). Optimism may be important for older people as they are prone to experiencing inevitable losses, including the loss of relatives and close friends. It may also serve as a buffer against the problems associated with ageing in Ghana such as decline in social support, poor health and poverty (Aboderin, 2004; Ayernor, 2012; Mba, 2004). Ju et al. (2013) found that being optimistic was positively associated with life satisfaction and positive affect but negatively associated with negative affect among community-dwelling older people. Albert et al. (2005) also found that patients who wished to die reported less optimism and comfort in religion.

The results of the study also revealed that the relationship between religious support and subjective well-being was partially mediated by optimism. Older people are able to approach life with confidence even in the face of difficulties when they know that they have caring and welcoming religious groups that will lend them support when they need it. This interpretation of the results is consistent with the findings from a study conducted by Karademas (2006) who found that the relationship among secular social support, life satisfaction and depression were partially mediated by optimism. Karademas (2006) argued that the partial mediation was a reflection of the relationship between cognitive representations and human functioning; optimism about the future may require positive appraisal of how individuals interact with their environments (Karademas, 2006). Karademas (2006) reasoned that for individuals to formulate and maintain optimistic beliefs, they rely on their own sense of capability as well as the positive evaluation of the capability of their social groups to provide them support when they need it. Members of religious institutions tend to be supportive considering that religious institutions emphasize the importance of helping others (Krause, Ellison, & Wulff, 1998). Religious scriptures offer a lot of information on helping others. A verse in the Qu'ran is a case in point: "And give to the near of kin his due and (to) the needy and the wayfarer, and squander not wastefully. Surely the squanderers are the devil's brethren. And the devil is ever ungrateful to his Lord" (Al Qu'ran 17:26-27 Maulana translation).

In summary, the results of the study largely supported the predictions from the religious coping, meaning making model, attachment theory and the psychosocial theory of development (Erikson, 1977; Kirkpatrick, 1992; Pargament, 1997; Park & Folkman, 1997). Spirituality and religious support were directly associated with subjective well-being but only spirituality was associated with the wish to die. The results also supported the theoretical postulation that various forms of religious coping serve several functions, including providing meaning and optimism (Kirkpatrick,

1992; Pargament et al., 1998). The positive relationship between the presence of meaning in life and well-being also supported the prediction of Erikson's (1977) theory of psychosocial development. Subsequently, the results of the study were largely consistent with the findings in other empirical studies. The results were, for instance, consistent with the findings in the literature that in terms of well-being rural residence was less favourable than urban residence in developing countries.

Contributions to literature

The study made four important contributions. First, the study contributes to ageing research in Ghana by the exploration of the influence of spirituality and religious support on the well-being of older people which has largely been missing in the literature. The results showed that spirituality was a significant predictor of subjective well-being and the wish to die. Religious support was a predictor of subjective well-being but not the wish to die.

Second, the study contributes to the literature on mechanisms that make it possible for the salutary effects of spirituality and religious support. Mediation studies in the religion/spirituality and mental health literature have focused predominantly on younger age groups and have used meaning/purpose in life as mediators (e.g. Khumalo, Wissing, & Schutte, 2014; Wnuk & Marcinkowski, 2014). Optimism as a mediator has been vastly ignored. Concerning religious support, the majority of studies have examined the direct relationship the construct has with well-being (e.g. Lee, 2011; Roh, Lee, & Yoon, 2013). The study showed that the influence of spirituality and religious support on the well-being of older people in selected rural and urban Ghanaian communities operated through the presence of meaning and optimism.

These findings have significant theoretical implications. Precisely, the prominence of spirituality over religious support with respect to well-being is relevant for the inward turn in personality

during late adulthood described by Neugarten (1997). Although Erikson did not articulate a systematic psychology of religion, other scholars (e.g. Atchley, 1997; McFadden, 1999) have extended his theory to religion/spirituality. McFadden (1999), for example, argued that religion can support the inward turn by providing opportunities for the expression of connection between humanity and the sacred. Further, spirituality helps older people make sense of their lives and come to terms with the triumphs and disappointments in their lives. Unsurprisingly, spirituality was strongly associated with meaning in life than optimism.

Third, the study makes contributions to the discourse on rural-urban comparison on well-being with respect to the focus on older people alone which has been lacking in the literature. The results of the study followed the pattern found in previous studies with samples across different age groups. Rural residence is less favourable in developing countries as older urban residents reported higher levels of subjective well-being and lower levels of the wish to die than their rural counterparts.

Lastly, the wish to die is an area of research in its infancy and it important to understand the underlying factors associated with the age-related wish (van Wijngaarden, Leget, & Goossensen, 2014). It is important because it may provide opportunities to make early detection and prevention of suicide among older people. The current study makes contributions to this nascent area of research. The results of the study revealed that spirituality, the presence of meaning and optimism were negatively associated with the wish to die.

Practical implications of the study

The current study has practical implications for mental health professionals. In an already religiously suffused Ghanaian climate, it may be imperative for mental health professionals to focus on the whole person, including the spiritual aspects of the elderly. The present study

highlighted the contribution of spirituality in the well-being of older people. In late life where losses are inevitable and provoke questions about meaning in life, spirituality provides an avenue for older people to derive meaning in life. Moreover, spirituality promotes positive attitudes (optimism) which is adaptive in the face of late life challenges. Thus, it is important for mental health professionals to focus on the spiritual aspects of their older clients.

It would also be important for mental health professionals to collaborate with faith communities in line with the holistic approach to healthcare of older people. Moberg (2008a) argued that by virtue of being human, individuals have a spiritual component and Bianchi (as cited in Yoon & Lee, 2006) describes ageing as a spiritual journey. Faith communities can play an important role in the spiritual journeys of the elderly and so collaborating with them is a good step to maintaining and improving the mental health of older people. For example, mental health professionals can refer their older clients for pastoral care and support.

Besides the provision of spiritual support for older people, faith communities can also play a big role in giving their older members a sense of meaning in life and optimism through the provision of emotional and tangible support which may elicit feelings of belongingness. In fact, some faith communities are already making efforts towards improving the well-being of older people. For example, the Shepherd Ageing Center in the Volta region founded in 2003 by the Rev. Dr. Seth Agidi is a case in point. The community-based interfaith organization brings older people across the Volta Region together and provides programmes tailored towards improving their well-being.

The government has made some efforts in addressing the challenges and opportunities that population ageing presents through the formulation and implementation of policies. The National Health Insurance Scheme (NHIS), Ghana National Disability and National Social Protection Strategy address issue of older people, albeit not specifically directed to older people. It may also

be essential for the government to design policies and programmes that will help improve the conditions of living in rural areas.

Limitations of the study

The study is limited in a number of ways. Firstly, the study did not examine meaning that is derived from religion/spirituality per se. Instead, general sense of meaning in life was assessed in this study. This, therefore, limits the interpretation of the results since general sense of meaning in life can be derived from sources other than religion/spirituality and religious communities. Work, generativity and personal relationships are sources individuals derive their meaning in life from (Emmons, 2005). That being said, the results from Oishi and Diener's (2014) study suggest that meaning in life tends to arise from religion in developing countries. They found that although life satisfaction was lower in poor nations than wealthy nations, meaning in life was higher in poor nations. This was because the people in poor nations were more religious than those in wealthy nations.

Secondly, the participants were not accustomed to the Likert-type format of the questionnaire. They appeared to have a preference for providing generalized responses instead of restricting their responses to the Likert response format. Subsequently, conducting the study with questionnaire administered in three different languages could theoretically create differences in scale properties. In addition, the use of self-report measures has the tendency of introducing biases into the study and its results. For instance, because the researcher and research assistants did the reading of the questionnaire and ticking of their responses of the participants, their presence could have elicited socially desirable responses, particularly with sensitive matters such as whether one wished to die or not. One of the ways the researcher and research assistants attempted to counteract this problem was to assure the participants that their responses will be kept private and confidential.

Thirdly, the data from this study is correlational in nature and so it limits causal inferences. Additionally, the cross-sectional nature of the study has the tendency of introducing confounds which includes changes in the relationships found due to changing life circumstances.

The study also failed to account for the possibility of regional differences confounding rural-urban differences since samples were drawn from two regions with marked socioeconomic differences. For instance, in the Southern part of Ghana, the Volta Region faces considerable socioeconomic disadvantage, reflected in poor and inadequate facilities and infrastructure (Ghana Statistical Service, 2013). The Greater Accra Region on the other hand enjoys the most socioeconomic development and so the rural-urban differences found may have been influenced by uncontrolled regional differences.

In spite of the limitations stated, the study provides important insights about the mediating roles of meaning in life and optimism in the relationships among spirituality, religious support and well-being of older people.

Directions for future studies

It is recommended that future studies should assess meaning that is derived specifically from religion/spirituality considering that general sense of meaning in life arise from other sources. This would help to deepen the understanding of the role of religion/spirituality in promoting meaning in life. Krause's (2003, 2008) studies are among the few studies that have examined religious meaning. There is a gap with respect to religious meaning in the literature on religion/spirituality and ageing in Africa.

The use of qualitative or mixed method approach to understand the meaning and nature of spirituality and its role in the well-being of older people can help to complement the findings from

quantitative studies. The qualitative approach provides opportunities for older people to air their thoughts and feelings with relatively less restriction than the questionnaire.

A longitudinal study that examines the relationships among spirituality, religious support and well-being among older people over different points in time would enable stronger and better causal inferences to be made compared to the cross-section design.

Conclusion

The current study was borne out of concerns about the missing dimensions of spirituality and religious support in the literature on ageing in Ghana. On the global level, the link between spirituality as well as religious support on health and well-being outcomes has been firmly established, but the aspect about the underlying mechanism through which the salutary effects operate is less known. Additionally, there has been little focus in the literature on rural-urban comparison on well-being. The study was therefore conducted to address these concerns in the literature.

The study employed the cross-sectional survey design. Data was collected from 235 older people in two rural communities in the Volta Region and two urban communities in the Greater Accra Region. The result from the study showed that spirituality and religious support were positively associated with subjective well-being. Spirituality was also negatively associated with the wish to die but religious support was not. The mediation analyses showed that the relationships between spirituality and the well-being indicators were fully mediated by the presence of meaning. Optimism partially mediated the relationships between spirituality and the well-being indicators. With regards to religious support, the presence of meaning in life and optimism partially mediated its relationship with subjective well-being. The results also showed that older people in the rural communities had lower scores on well-being than their urban counterparts.

The findings were largely in line with the predictions of the theories used in the study. The direct relationships between the two positive forms of religious coping and the well-being indicators confirm the prediction of the religious coping theory that positive religious coping yields beneficial mental health outcomes (Pargament et al., 1998). The results also confirm the aspect of the theory about religious coping methods serving several functions. In this study spirituality and religious support were sources older people derived meaning and optimism. The relationship between spirituality and meaning in life confirms the assumption that spirituality is an integral part the global meaning system of Park and Folkman's (1997) meaning making model. The assumption about the beneficial impact of meaning in late adulthood in Erikson's (1977) theory is confirmed by the results. The positive relationship between spirituality and optimism is in line Kirkpatrick's (1992) extension of the attachment theory. The results of the study were also consistent with the findings of other empirical studies.

In addition to the contribution made by the study in the religion/spirituality and ageing literature, the study also has practical implications. The study makes a case for why it would be important for mental health professionals to incorporate spirituality in their efforts to promote and maintain the well-being of older people. The study also highlights why it may be important for mental health professionals to collaborate with faith communities.

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APPENDICES

APPENDIX A: Questionnaire

Hello, my name is Eric Yao Aglozo. I am a Master's student in Psychology from the University of Ghana, Legon.

Purpose of the study

The well-being of older people has captured the main focus of discussions on population ageing in Ghana. In line with the interest in the well-being of older people in Ghana, this study examines how factors such as meaning in life, spirituality, religious and social support are related to well-being among older people.

If you agree to participate in this study, you would be required to fill the questionnaire by ticking your responses from the options provided. It will take approximately 20 to 30 minutes to complete the questionnaire. Please take your time to read and answer honestly to the statements/questions in the questionnaire.

In a case in which you have pertinent questions about the study or need further clarification, please feel free to contact me on **0546770452** or eric Yao aglozo@gmail.com.

Thank you very much.

INFORMED CONSENT

I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and I am willing to give consent to participate in this study. I will not have waived any of my rights by signing this consent form.

Signature of participant

Date

Ethical Clearance



UNIVERSITY OF GHANA

ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No.....

21st December, 2016

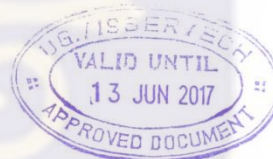
Mr. Eric Yaw Aglozo
Department of Psychology
University of Ghana
Legon

Dear Mr. Aglozo,

ECH 050/16-17: SPIRITUALITY, MEANING IN LIFE AND SUBJECTIVE WELL-BEING: A CASE OF OLDER PEOPLE IN RURAL AND URBAN GHANA

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date: 13/06/17
On Agenda for: Initial Submission
Date of Submission: 17/10/16
ECH Action: Approved
Reporting: Quarterly



Please accept my congratulations.

Yours Sincerely,

Rev. Prof. J. O. Y. Mante
ECH Chair

CC: Dr. Maxwell Asumeng, Department of Psychology

Section A

Age: _____

Age: 60-74 years 75-84 years 85 years and above

Sex: Male Female

Ethnic Background: Akan Ewe Ga Other (specify _____)

Religious Affiliation: Christian Muslim Traditionalist Other
(specify _____)

Highest Level of Education: Primary School Middle School Secondary School
Sixth Form Tertiary
Other (specify _____)

Economic activity: Yes No If yes, what do you do? _____

Monthly Income (GH¢): Below 100 Between 100 and 199 Between 200 and 500
Between 501 and 800 Between 801 and 1200 Above 1201

Receiving Pension benefit: Yes No

Marital status: Never Married Single Married Divorced Separated
Widowed

Have children: Yes No Number of children: _____

Do you live with somebody in this household? Yes No

If yes, what is your relationship with this person? Spouse Children Grandchildren
Sibling Other (specify _____)

Section B

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you

can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

Statement	1	2	3	4	5	6	7
1. I understand my life's meaning.							
2. I am looking for something that makes my life feel meaningful.							
3. I am always looking to find my life's purpose.							
4. My life has a clear sense of purpose.							
5. I have a good sense of what makes my life meaningful.							
6. I have discovered a satisfying life purpose.							
7. I am searching for something that makes my life feel significant.							
8. I am seeking a purpose or mission for my life.							
9. My life has no clear purpose.							
10. I am searching for meaning in life.							

Section C

Please indicate to what extent you agree or disagree with the following statements by using the scale below: **1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Somewhat Agree, 5= Agree, 6= Strongly Agree.**

Statement	1	2	3	4	5	6
1. I often feel strongly related to a power greater than myself.						
2. My faith gives my life meaning and purpose.						
3. My faith is a way of life.						
4. I often think about issues concerning my faith.						
5. My faith is an important part of my individual identity.						
6. My relationship to God is experienced as unconditional love.						
7. My faith helps me to confront tragedy and suffering.						
8. I gain spiritual strength by trusting in a higher power.						
9. My faith is often a deeply emotional experience.						

10. I make a conscious effort to live in accordance with my spiritual values.						
11. My faith enables me to experience forgiveness when I act against my moral conscience.						
12. Sharing faith with others is important for my spiritual growth.						
13. My faith guides my whole approach to life.						
14. I believe that there is only one true faith.						
15. Ideas from faiths different from my own may increase my understanding of spiritual truth.						
16. One should not marry someone of a different faith.						
17. I believe that the world is basically good.						
18. Learning about different faiths is an important part of my spiritual development.						
19. I feel a strong spiritual bond with all of humankind.						
20. I never challenge the teachings of my faith.						
21. My spiritual beliefs change as I encounter new ideas and experiences.						
22. Persons of different faiths share a common spiritual bond.						
23. I believe that the world is basically evil.						

Section D

Please read the statements and tick what applies to you. Please answer according to these scales:

1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree.

Statement	1	2	3	4	5
1. I can turn to other participants in my religious group for advice when I have problems.					
2. If something went wrong, my religious leaders would give me help.					
3. Other participants in my religious group care about my life and situation.					
4. I am valued by my religious leaders.					
5. I do not feel close to other participants in my religious group.					
6. I can turn to my religious leaders for advice when I have problems.					
7. Other participants in my religious group give me the sense that I belong.					

8. My religious leaders care about my life and situation.					
9. I feel appreciated by other participants in my religious group.					
10. I do not feel close to my religious leaders.					
11. If something went wrong, other participants in my religious group would give me help.					
12. My religious leaders give me the sense that I belong.					
13. I am valued by other participants in my religious group.					
14. I feel appreciated by my religious leaders.					

Section E

Please read the statements and tick what applies to you. Please answer according to these scales:

1= Very Strongly Disagree; 2= Strongly Disagree; 3= Mildly Disagree; 4= Neutral; 5= Mildly Agree; 6= Strongly Agree; 7= Very Strongly Agree.

Statement	1	2	3	4	5	6	7
1. There is a special person who is around when I am in need.							
2. There is a special person with whom I can share my joys and sorrows.							
3. My family really tries to help me.							
4. I get the emotional help and support I need from my family.							
5. I have a special person who is a real source of comfort to me.							
6. My friends and neighbours really try to help me.							
7. I can count on my friends and neighbours when things go wrong.							
8. I can talk about my problems with my family.							
9. I have friends and neighbours with whom I can share my joys and sorrows.							
10. There is a special person in my life who cares.							
11. My family is willing to help me make decisions.							
12. I can talk about my problem with friends and neighbours.							

Section F

Please think about what you have been doing and experiencing **during the past four weeks**. Then report how much you experienced each of the following feelings, using the scale below. For each item, select a number from 1 to 5, and indicate that number on your response sheet. **1= Very Rarely or Never; 2= Rarely; 3= Sometimes; 4= Often; 5= Very Often or Always**

Experience	1	2	3	4	5
1. Positive					
2. Negative					
3. Good					
4. Bad					
5. Pleasant					
6. Unpleasant					
7. Happy					
8. Sad					
9. Afraid					
10. Joyful					
11. Angry					
12. Contented					

Section G

Please read the statements and tick what applies to you. Please answer according to these scales: **1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree nor Disagree, 5 = Slightly Agree, 6 = Agree, 7 = Strongly Agree.**

Statement	1	2	3	4	5	6	7
1. In most ways my life is close to my ideal.							
2. The conditions of my life are excellent.							
3. I am satisfied with my life.							
4. So far I have gotten the important things I want in life.							
5. If I could live my life over, I would change almost nothing							

Section H

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer. **1 = I disagree a lot, 2 = I disagree a little, 3 = I neither agree nor disagree, 4 = I agree a little, and 5= I agree a lot.**

Statement	1	2	3	4	5
1. In uncertain times, I usually expect the best.					
2. It's easy for me to relax.					
3. If something can go wrong for me, it will.					
4. I'm always optimistic about my future.					
5. I enjoy my friends a lot.					
6. It's important for me to keep busy.					
7. I hardly ever expect things to go my way.					
8. I don't get upset too easily.					
9. I rarely count on good things happening to me.					
10. Overall, I expect more good things to happen to me than bad.					

Section I

This questionnaire asks for your views about your health. This information will keep track of how you feel and how well you are able to do your usual activities.

Please answer every question by marking one box. If you are unsure about how to answer, please give the best answer you can.

1. In general, would you say your health is:

Excellent Very good Good Fair Poor

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

2. Moderate activities, such as moving a table, bathing, dressing or cooking.

Yes, limited a lot Yes, limited a little No, not limited at all

3. Walking a mile

Yes, limited a lot Yes, limited a little No, not limited at all

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

4. Accomplished less than you would like

Yes No

5. Were limited in the kind of work or other activities.

Yes No

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)

6. Accomplished less than you would like

Yes No

7. Didn't do work or other activities as carefully as usual.

Yes No

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all A little bit Moderately Quite a bit Extremely

These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time **during the past 4 week**.

9. Have you felt calm and peaceful?

All of the time Most of the time A good bit of the time

Some of the time A little of the time None of the time

10. Did you have a lot of energy?

All of the time Most of the time A good bit of the time
 Some of the time A little of the time None of the time

11. Have you felt downhearted and sad?

All of the time Most of the time A good bit of the time
 Some of the time A little of the time None of the time

12. **During the past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the time Most of the time Some of the time
 A little of the time None of the time

Section J

Please be as honest and accurate as you can throughout. Please indicate to what extent you disagree or agree with the following statements. **1= Strongly Disagree, 2= Disagree, 3= Somewhat Disagree, 4= Somewhat Agree, 5= Agree, 6= Strongly Agree.**

Statement	1	2	3	4	5	6
1. There have been times when I wished that I were dead.						
2. I sometimes think that death would solve my problems.						
3. Sometimes I wish I could go to sleep for several years.						
4. I occasionally day-dream about being dead.						
5. I sometimes think that there is little point in living.						
6. I have occasionally fantasized about my funeral.						
7. I have on occasions lost my desire to live.						
8. I sometimes wish that I had never been born.						
9. I sometimes think that there is no purpose to life.						
10. It occasionally crosses my mind that life is not worth living.						

APPENDIX B: Validation

1. Spiritual Experience Index (Revised) (Genia, 1997)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.780
Bartlett's Test of Sphericity	Approx. Chi-Square
	784.108
	Df
	91
	Sig.
	.000

Communalities

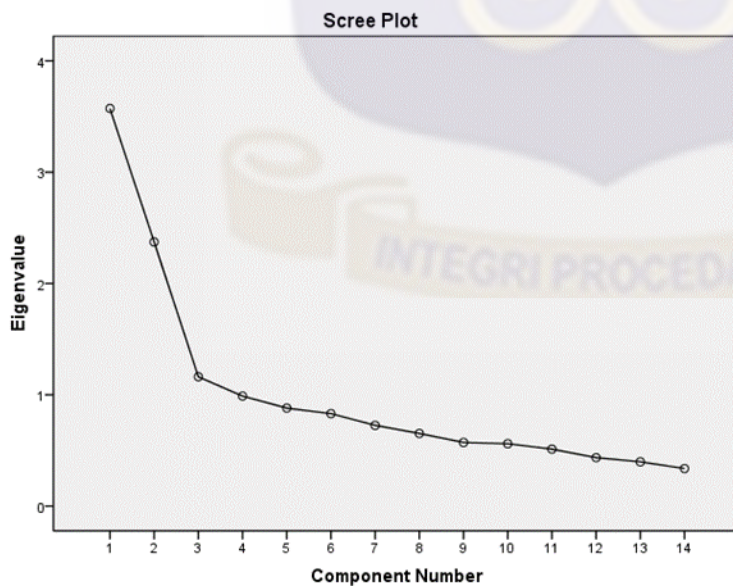
	Initial	Extraction
1. I often feel strongly related to a power greater than myself.	1.000	.204
2. My faith gives my life meaning and purpose.	1.000	.542
3. My faith is a way of life.	1.000	.441
5. My faith is an important part of my individual identity.	1.000	.484
6. My relationship with God is experienced as unconditional love.	1.000	.449
7. My faith helps me to confront tragedy and suffering.	1.000	.527
8. I gain spiritual strength by trusting in a higher power.	1.000	.429
9. My faith is often a deeply emotional experience.	1.000	.226
13. My faith guides my whole approach to life.	1.000	.279
15. Ideas from faith different from my own may increase my understanding of spiritual truth	1.000	.495
18. Learning from different faiths is an important part of my spiritual development.	1.000	.540
19. I feel a strong spiritual bond with all humankind.	1.000	.474
21. My spiritual beliefs change as I encounter new ideas and experiences.	1.000	.334
22. Persons of different faiths share a common spiritual bond.	1.000	.521

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
				Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.573	25.520	25.520	3.573	25.520	25.520	3.572	25.513	25.513
2	2.373	16.948	42.468	2.373	16.948	42.468	2.374	16.955	42.468
3	1.162	8.300	50.768						
4	.988	7.058	57.826						
5	.881	6.291	64.117						
6	.831	5.934	70.051						
7	.725	5.181	75.232						
8	.653	4.663	79.894						
9	.571	4.082	83.976						
10	.560	4.002	87.978						
11	.512	3.658	91.636						
12	.436	3.111	94.747						
13	.398	2.842	97.589						
14	.337	2.411	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component	
	1	2
SEI_SS2	.734	
SEI_SS7	.716	
SEI_SS5	.691	
SEI_SS6	.670	
SEI_SS3	.664	
SEI_SS8	.654	
SEI_SS13	.528	
SEI_SS9	.475	
SEI_SS1	.451	
SEI_SO18		.733
SEI_SO22		.722
SEI_SO15		.704
SEI_SO19		.678
SEI_SO21		.576

Extraction Method: Principal
Component Analysis.
a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
SEI_SS2	.732	
SEI_SS7	.719	
SEI_SS5	.693	
SEI_SS6	.670	
SEI_SS3	.663	
SEI_SS8	.653	
SEI_SS13	.528	
SEI_SS9	.475	
SEI_SS1	.451	
SEI_SO18		.734
SEI_SO22		.721
SEI_SO15		.703
SEI_SO19		.681
SEI_SO21		.575

Extraction Method: Principal
Component Analysis.
Rotation Method: Varimax with Kaiser
Normalization.
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	1.000	.028
2	-.028	1.000

Extraction Method: Principal
Component Analysis.
Rotation Method: Varimax with Kaiser
Normalization.

2. Meaning in Life Questionnaire (MLQ; Steger et al., 2006)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.714
Bartlett's Test of Sphericity	Approx. Chi-Square
	854.972
	Df
	45
	Sig.
	.000

Communalities

	Initial	Extraction
1. I understand my life's meaning.	1.000	.383
2. I am looking for something that makes my life feel meaningful.	1.000	.542
3. I am always looking to find my life's purpose.	1.000	.708
4. My life has a clear sense of purpose.	1.000	.674
5. I have a good sense of what makes my life meaningful.	1.000	.624
6. I have discovered a satisfying life purpose.	1.000	.520
7. I am searching for something that makes my life feel significant.	1.000	.681
8. I am seeking a purpose or mission for my life.	1.000	.721
9. My life has no clear purpose.	1.000	.437
10. I am searching for meaning in life.	1.000	.422

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Total
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	3.254	32.538	32.538	3.254	32.538	32.538	
2	2.458	24.583	57.121	2.458	24.583	57.121	
3	.857	8.567	65.688				
4	.776	7.756	73.444				
5	.644	6.438	79.882				
6	.578	5.777	85.659				
7	.511	5.105	90.764				
8	.387	3.871	94.635				
9	.368	3.679	98.313				
10	.169	1.687	100.000				

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component	
	1	2
MLQ_7S	.775	
MLQ_8S	.758	.383
MLQ_3S	.727	.424
MLQ_2S	.693	
MLQ_10S	.632	
MLQ_4P		.770
MLQ_5P	-.314	.725
MLQ_6P	-.404	.597
MLQ_1P	-.356	.506
MLQ_9P	-.450	.485

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
MLQ_8S	.849	
MLQ_3S	.839	
MLQ_7S	.820	
MLQ_2S	.731	
MLQ_10S	.633	
MLQ_4P		.816
MLQ_5P		.789
MLQ_6P		.715
MLQ_9P		.635
MLQ_1P		.611

Component Transformation Matrix

Component	1	2
1	.895	-.446
2	.446	.895

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

a. Rotation converged in 3 iterations.

3. The Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.884
Bartlett's Test of Sphericity	Approx. Chi-Square
	1234.957
	Df
	66
	Sig.
	.000

Communalities

	Initial	Extraction
1. Positive	1.000	.463
2. Negative	1.000	.492
3. Good	1.000	.701
4. Bad	1.000	.503
5. Pleasant	1.000	.566

6. Unpleasant	1.000	.604
7. Happy	1.000	.754
8. Sad	1.000	.612
9. Afraid	1.000	.511
10. Joyful	1.000	.617
11. Angry	1.000	.522
12. Contented	1.000	.525

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
	1	5.366	44.720	44.720	5.366	44.720	44.720
2	1.503	12.523	57.243	1.503	12.523	57.243	2.820
3	.824	6.868	64.111				
4	.757	6.308	70.419				
5	.740	6.167	76.586				
6	.599	4.993	81.579				
7	.508	4.229	85.808				
8	.451	3.759	89.567				
9	.392	3.270	92.838				
10	.346	2.883	95.721				
11	.264	2.203	97.924				
12	.249	2.076	100.000				

Extraction Method: Principal Component Analysis.

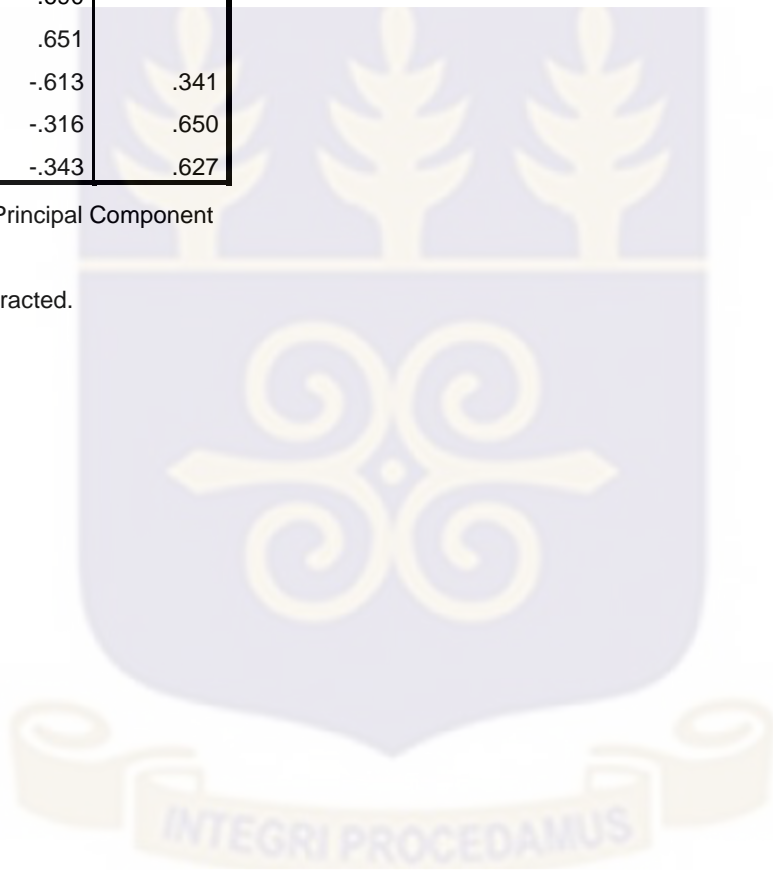
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Matrix^a

	Component	
	1	2
SPANE_P7	.799	.339
SPANE_N8	-.759	
SPANE_P10	.756	
SPANE_P3	.751	.369
SPANE_P5	.716	
SPANE_N6	-.712	.311
SPANE_P12	.709	
SPANE_N4	-.690	
SPANE_P1	.651	
SPANE_N2	-.613	.341
SPANE_N11	-.316	.650
SPANE_N9	-.343	.627

Extraction Method: Principal Component Analysis.

a. 2 components extracted.



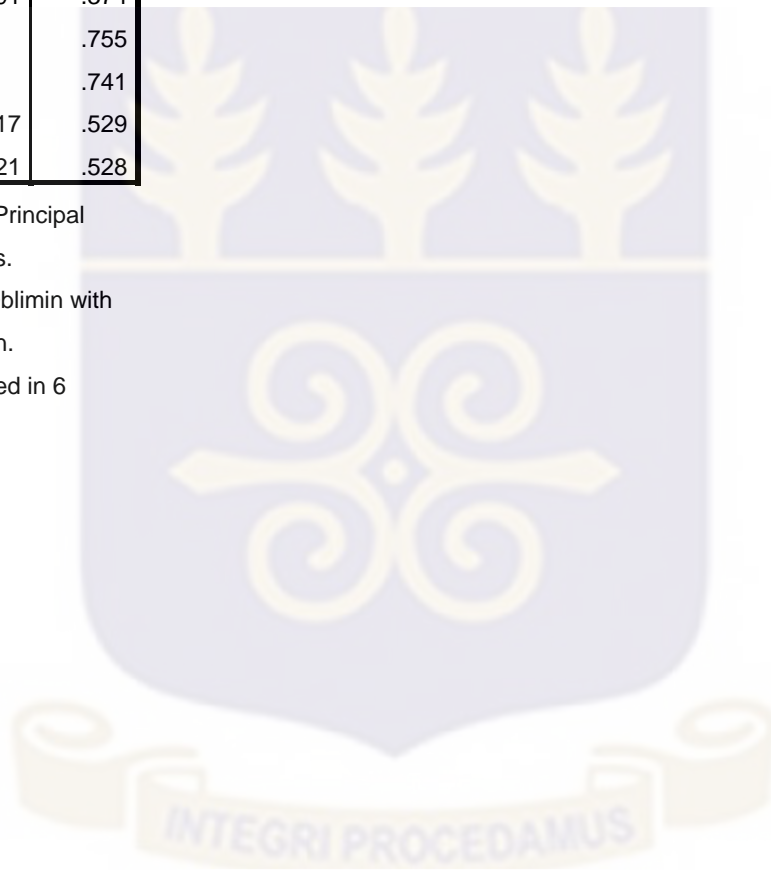
Pattern Matrix^a

	Component	
	1	2
SPANE_P7	.898	
SPANE_P3	.876	
SPANE_P10	.782	
SPANE_P5	.760	
SPANE_P12	.703	
SPANE_P1	.684	
SPANE_N8	-.536	.418
SPANE_N4	-.491	.374
SPANE_N11		.755
SPANE_N9		.741
SPANE_N2	-.317	.529
SPANE_N6	-.421	.528

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.



Structure Matrix

	Component	
	1	2
SPANE_P7	.862	
SPANE_P3	.825	
SPANE_P10	.785	
SPANE_P5	.752	
SPANE_P12	.722	
SPANE_P1	.681	
SPANE_N8	-.676	.597
SPANE_N4	-.616	.537
SPANE_N11		.712
SPANE_N9		.710
SPANE_N6	-.597	.668
SPANE_N2	-.493	.635

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Component Correlation Matrix

Component	1	2
1	1.000	-.333
2	-.333	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

4. Multi-Faith Religious Support Scale (MFRSS; Bjorck & Maslim, 2011)

Communalities

	Initial	Extraction
3. Other participants in my religious group care about my life and situations.	1.000	.563
4. I am valued by my religious leaders.	1.000	.559
5. I do not feel close to other participants in my religious group.	1.000	.396
6. I can turn to my religious leaders for advice when I have problems.	1.000	.508
7. Other participants in my religious group give me the sense that I belong.	1.000	.738
8. My religious leaders care about my life and situation.	1.000	.596
9. I feel appreciated by other participants in my religious group.	1.000	.585
10. I do not feel close to my religious leaders.	1.000	.375
11. If something went wrong, other participants in my religious group would give me help.	1.000	.533
12. My religious leaders give me the sense that I belong.	1.000	.695
13. I am valued by other participants in my religious group.	1.000	.654
14. I feel appreciated by my religious leaders.	1.000	.680

Extraction Method: Principal Component Analysis.

Component Matrix

	Component
7. If something went wrong, other participants in my religious group would give me help.	.859
12. My religious leaders give me the sense that I belong.	.834
14. I feel appreciated by my religious leaders.	.825
13. I am valued by other participants in my religious group.	.808
8. My religious leaders care about my life and situation.	.772
9. I feel appreciated by other participants in my religious group.	.765
3. Other participants in my religious group care about my life and situations.	.750

4. I am valued by my religious leaders.	.748
11. If something went wrong, other participants in my religious group would give me help.	.730
6. I can turn to my religious leaders for advice when I have problems.	.713
5. I do not feel close to other participants in my religious group.	.630
10. I do not feel close to my religious leaders.	.613

Extracted Method: Principal Component Analysis. a. 1 components extracted.

APPENDIX C: Internal consistency of measures

1. Meaning in Life Questionnaire (MLQ; Steger et al., 2006)

Presence of meaning subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.749	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
MLQ_1P	22.5617	20.230	.447	.738
MLQ_4P	22.0681	21.747	.613	.676
MLQ_5P	22.1745	22.341	.571	.690
MLQ_6P	22.6596	21.114	.538	.695
ML1_9P	22.3489	20.938	.462	.726

Search for meaning subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.835	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
MLQ_2S	19.0468	47.088	.599	.811
MLQ_3S	19.2255	43.381	.705	.782
MLQ_7S	19.3234	42.955	.688	.786
MLQ_8S	19.2170	42.393	.718	.778
MLQ_10S	19.6638	45.669	.491	.846

2. Spiritual Experience Index (Revised; Genia, 1997)

Spiritual support subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.798	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SEI_SS1	42.3830	19.750	.337	.800
SEI_SS2	42.5191	18.798	.609	.763
SEI_SS3	42.4340	19.298	.533	.773
SEI_SS5	42.3872	18.819	.557	.769
SEI_SS6	42.3702	18.482	.531	.772
SEI_SS7	42.3447	18.697	.581	.766
SEI_SS8	42.5447	18.343	.528	.772
SEI_SS9	42.7191	19.852	.361	.795
SEI_SS13	42.4255	19.955	.402	.789

Spiritual openness subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.716	5

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

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SEI_SO15	12.6723	25.623	.480	.666
SEI_SO18	12.4340	25.623	.524	.647
SEI_SO19	12.2681	27.342	.480	.666
SEI_SO21	12.7915	28.072	.371	.709
SEI_SO22	13.0340	26.213	.522	.649

Multi-Faith Religious Support Scale (MFRSS; Bjorck & Maslim, 2011)

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.928	12

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

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RSS_P3	45.3745	61.791	.691	.922
RSS_L4	45.0426	64.109	.686	.923
RSS_P5	45.2723	62.934	.580	.927
RSS_L6	45.1149	62.837	.659	.924
RSS_P7	45.0681	61.474	.809	.918
RSS_L8	45.2894	61.497	.722	.921
RSS_P9	45.1447	63.235	.705	.922
RSS_L10	45.2426	62.415	.558	.929
RSS_P11	45.3404	61.875	.673	.923
RSS_L12	45.0936	61.598	.785	.919
RSS_P13	45.0894	61.971	.755	.920
RSS_L14	44.9702	62.046	.767	.919

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988)

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.902	12

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS_1S	51.8723	213.847	.468	.902
SS_2S	51.7957	213.821	.513	.899
SS_3F	52.6766	197.382	.704	.890
SS_4F	52.5660	195.871	.741	.888
SS_5S	51.7617	215.080	.516	.899
SS_6FN	53.5234	196.917	.669	.892
SS_7FN	53.5872	194.799	.679	.892
SS_8F	52.4170	201.620	.680	.892
SS_9FN	52.8170	202.236	.648	.893
SS_10S	51.6043	214.830	.560	.898
SS_11F	52.5532	201.624	.692	.891
SS_12FN	53.4298	199.109	.620	.895

Significant other subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.802	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS_1S	16.8213	14.147	.613	.757
SS_2S	16.7447	15.755	.531	.794
SS_5S	16.7106	14.907	.667	.729
SS_10S	16.5532	15.462	.671	.730

Family subscale

Case Processing Summary

		N	%
Cases	Valid	235	100.0
	Excluded ^a	0	.0
	Total	235	100.0

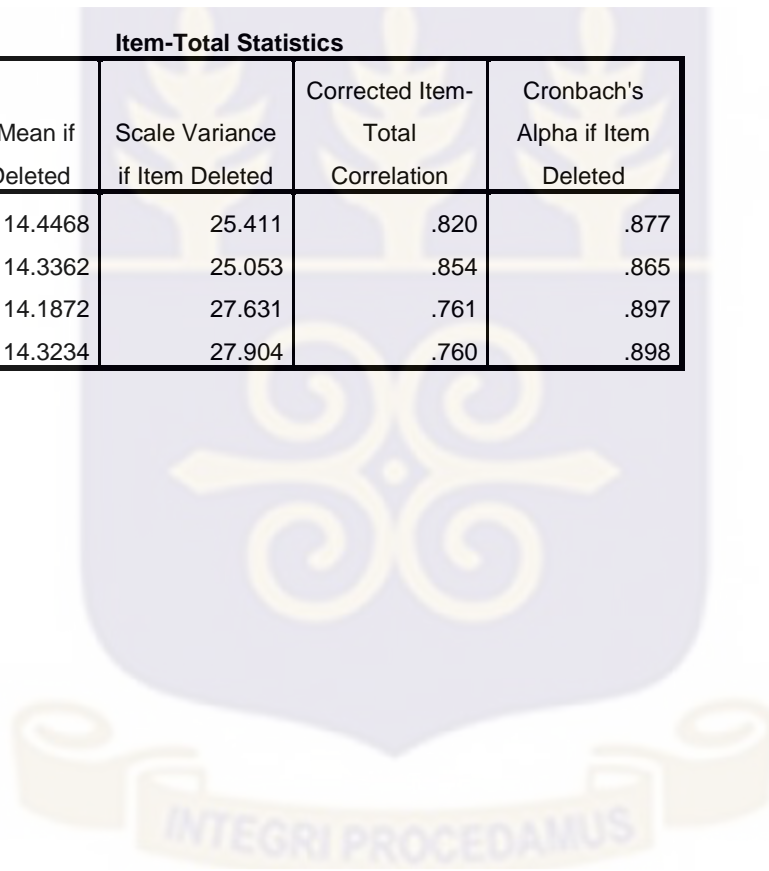
Reliability Statistics

Cronbach's Alpha	N of Items
.911	4

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

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS_3F	14.4468	25.411	.820	.877
SS_4F	14.3362	25.053	.854	.865
SS_8F	14.1872	27.631	.761	.897
SS_11F	14.3234	27.904	.760	.898

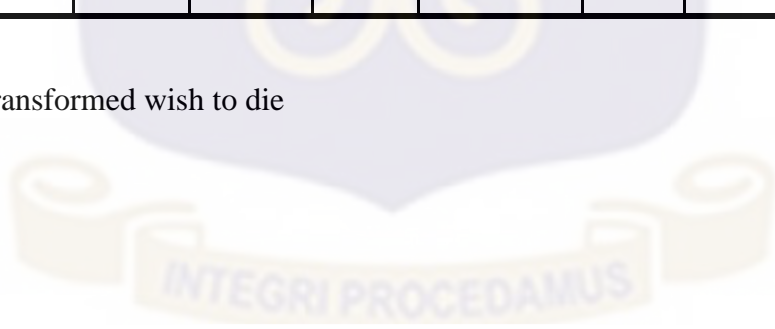


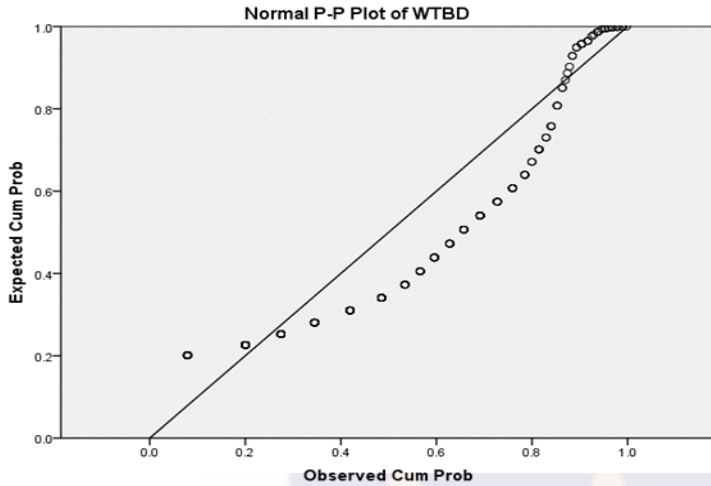
APPENDIX D: Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
	LOT_R	235	9.00	30.00	22.9021	3.98327	-.330	.159	-.161
MLQ_P	235	7.00	35.00	27.9532	5.59246	-1.179	.159	1.613	.316
MLQ_S	235	5.00	35.00	24.1191	8.15257	-.938	.159	-.110	.316
SEI_SS	235	27.00	54.00	47.7660	4.85698	-1.570	.159	3.072	.316
SEI_SO	235	5.00	30.00	15.8000	6.22636	.154	.159	-.883	.316
MFRSS	235	17.00	60.00	49.2766	8.58368	-1.213	.159	1.533	.316
MSPSS	235	16.00	84.00	57.3277	15.50982	-.467	.159	-.645	.316
SPANE_P	235	10.00	30.00	21.2723	4.97797	-.336	.159	-.616	.316
SPANE_N	235	6.00	28.00	14.3404	4.51624	.149	.159	-.491	.316
SWL	235	6.00	35.00	25.5574	5.71621	-.820	.159	.365	.316
PCS12	235	17.80	61.64	42.8368	9.91098	-.343	.159	-.655	.316
MCS12	235	16.66	65.15	46.7064	10.36801	-.388	.159	-.567	.316
WTBD	235	10.00	59.00	19.8043	11.71911	1.696	.159	2.206	.316
SWB	235	-1.00	59.00	32.4894	12.16249	-.334	.159	-.368	.316
Valid N (listwise)	235								

P-P plot of non-transformed wish to die





After the log transformation of the wish to die

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness	Kurtosis		
					Deviation		Statistic	Std. Error	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	
WTBDLOG	235	1.00	1.77	1.2393	.21103	.850	.159	-.154	.316
Valid N (listwise)	235								

APPENDIX F: t-test

Group Statistics

ID	N	Mean	Std. Deviation	Std. Error Mean
SWB Rural	120	30.2250	10.96247	1.00073
Urban	115	34.8522	12.92912	1.20565

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
SWB Equal variances assumed	5.858	.016	-2.963	233	.003	-4.62717	1.56139	-7.70343	-1.55092
Equal variances not assumed			-2.953	223.544	.003	-4.62717	1.56686	-7.71488	-1.53947

Group Statistics

ID	N	Mean	Std. Deviation	Std. Error Mean
WTBDLOG Rural	120	1.2896	.23597	.02154
Urban	115	1.1868	.16683	.01556

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
WTBDLOG	Equal variances assumed	15.473	.000	3.844	233	.000	.10287	.02676	.05015	.15560
	Equal variances not assumed			3.872	214.571	.000	.10287	.02657	.05050	.15525

APPENDIX G: Multiple Regression

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.684 ^a	.468	.452	9.00432	.468	28.562	7	227	.000	
_ 2	.714 ^b	.510	.491	8.67793	.042	9.698	2	225	.000	
3	.758 ^c	.574	.553	8.13242	.063	16.599	2	223	.000	1.802

a. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74

b. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS

c. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS, LOT_R, MLQ_P

d. Dependent Variable: SWB

ANOVA^d

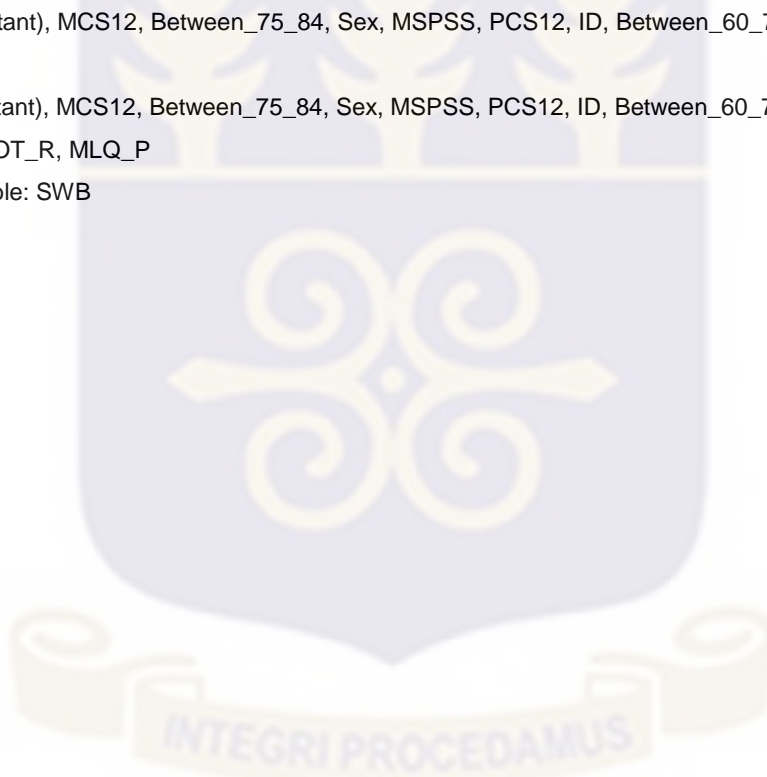
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16210.047	7	2315.721	28.562	.000 ^a
	Residual	18404.676	227	81.078		
	Total	34614.723	234			
2	Regression	17670.759	9	1963.418	26.072	.000 ^b
	Residual	16943.964	225	75.307		
	Total	34614.723	234			
3	Regression	19866.355	11	1806.032	27.308	.000 ^c
	Residual	14748.369	223	66.136		
	Total	34614.723	234			

a. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74

b. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS

c. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS, LOT_R, MLQ_P

d. Dependent Variable: SWB



Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-14.124	4.155		-3.399	.001		
ID	-.320	1.332	-.013	-.240	.810	.778	1.285
Between_60_74	-1.005	2.285	-.038	-.440	.660	.321	3.112
Between_75_84	1.242	2.510	.042	.495	.621	.332	3.013
Sex	-2.066	1.201	-.084	-1.720	.087	.971	1.030
MSPSS	.172	.040	.220	4.336	.000	.913	1.096
PCS12	.205	.066	.167	3.093	.002	.800	1.249
MCS12	.636	.063	.542	10.064	.000	.806	1.240
2 (Constant)	-35.003	6.348		-5.514	.000		
ID	-.380	1.284	-.016	-.296	.767	.778	1.285
Between_60_74	-.569	2.233	-.021	-.255	.799	.313	3.199
Between_75_84	1.312	2.419	.044	.542	.588	.332	3.014
Sex	-2.504	1.163	-.102	-2.153	.032	.963	1.039
MSPSS	.138	.040	.176	3.490	.001	.852	1.174
PCS12	.183	.064	.149	2.847	.005	.791	1.263
MCS12	.581	.062	.496	9.340	.000	.773	1.294
SEI_SS	.398	.128	.159	3.119	.002	.839	1.192
MFRSS	.148	.076	.104	1.950	.052	.758	1.319
3 (Constant)	-37.515	6.136		-6.114	.000		
ID	-1.322	1.214	-.054	-1.088	.278	.764	1.309
Between_60_74	-1.707	2.127	-.064	-.803	.423	.302	3.307
Between_75_84	.004	2.296	.000	.002	.999	.323	3.091
Sex	-1.924	1.110	-.079	-1.733	.084	.928	1.078
MSPSS	.140	.038	.178	3.642	.000	.798	1.254
PCS12	.134	.061	.110	2.206	.028	.775	1.291
MCS12	.495	.061	.422	8.165	.000	.715	1.399
SEI_SS	.124	.130	.049	.951	.342	.711	1.407
MFRSS	.096	.072	.068	1.331	.185	.735	1.361
MLQ_P	.514	.121	.237	4.252	.000	.618	1.619
LOT_R	.482	.153	.158	3.151	.002	.763	1.311

a. Dependent Variable: SWB

Casewise Diagnostics^a

Case Number	Std. Residual	SWB	Predicted Value	Residual
20	-3.307	-1.00	25.8932	-26.89318
121	-3.611	1.00	30.3688	-29.36880

a. Dependent Variable: SWB

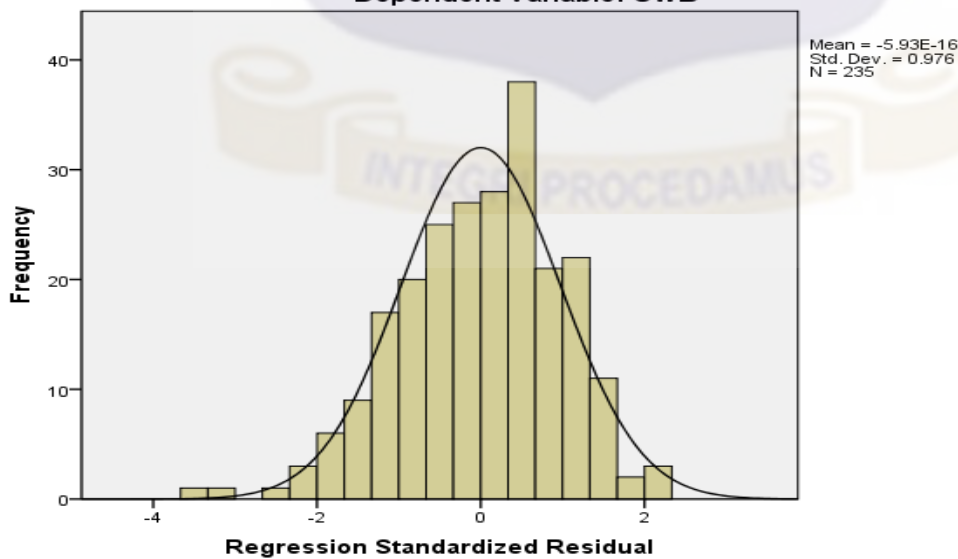
Residuals Statistics^a

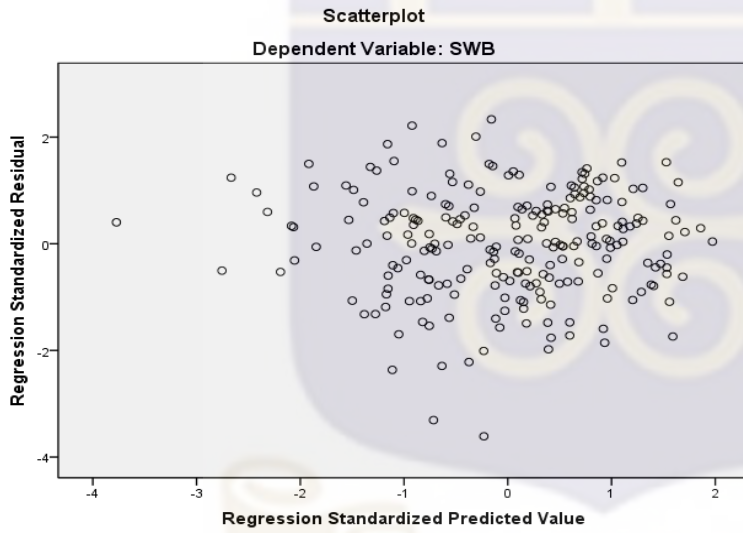
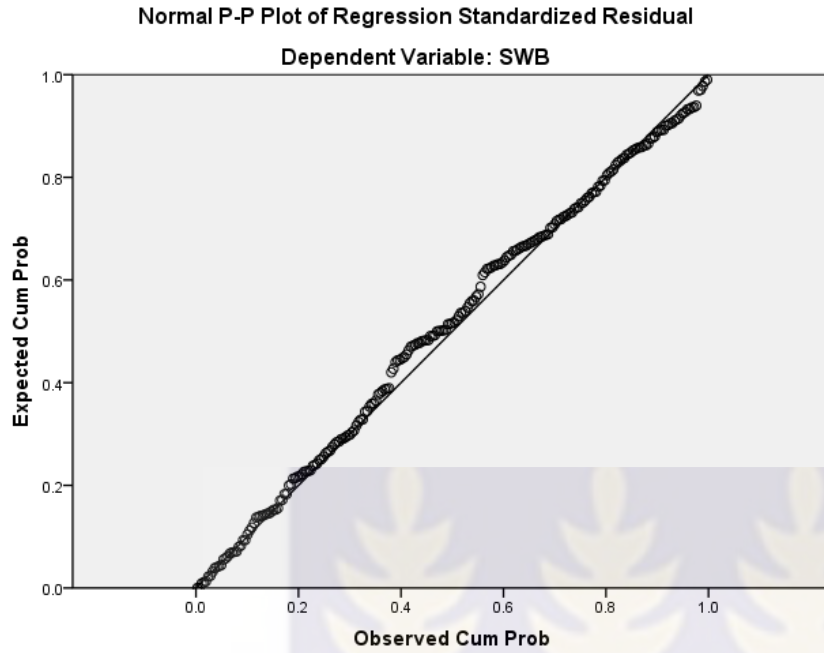
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-2.2705	50.6706	32.4894	9.21406	235
Std. Predicted Value	-3.772	1.973	.000	1.000	235
Standard Error of Predicted Value	1.023	3.124	1.794	.400	235
Adjusted Predicted Value	-2.8035	50.6532	32.4764	9.25091	235
Residual	-29.36880	18.97046	.00000	7.93897	235
Std. Residual	-3.611	2.333	.000	.976	235
Stud. Residual	-3.673	2.364	.001	1.002	235
Deleted Residual	-30.37711	19.54435	.01296	8.37471	235
Stud. Deleted Residual	-3.781	2.388	.000	1.008	235
Mahal. Distance	2.707	33.539	10.953	5.551	235
Cook's Distance	.000	.050	.005	.007	235
Centered Leverage Value	.012	.143	.047	.024	235

a. Dependent Variable: SWB

Histogram

Dependent Variable: SWB





Model Summary^d

Model	R		Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
	R	R Square			R Square Change	F Change	df1	df2	Sig. F Change	
1	.513 ^a	.263	.241	.18387	.263	11.601	7	227	.000	
2	.532 ^b	.283	.254	.18221	.020	3.081	2	225	.048	
3	.573 ^c	.328	.295	.17715	.045	7.526	2	223	.001	1.823

a. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74

b. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS

c. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS, LOT_R, MLQ_P

d. Dependent Variable: WTBDLOG

ANOVA^d

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.746	7	.392	11.601	.000 ^a
	Residual	7.675	227	.034		
	Total	10.420	234			
2	Regression	2.950	9	.328	9.873	.000 ^b
	Residual	7.470	225	.033		
	Total	10.420	234			
3	Regression	3.422	11	.311	9.915	.000 ^c
	Residual	6.998	223	.031		
	Total	10.420	234			

a. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74

b. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS

c. Predictors: (Constant), MCS12, Between_75_84, Sex, MSPSS, PCS12, ID, Between_60_74, SEI_SS, MFRSS, LOT_R, MLQ_P

d. Dependent Variable: WTBDLOG

Coefficients^a

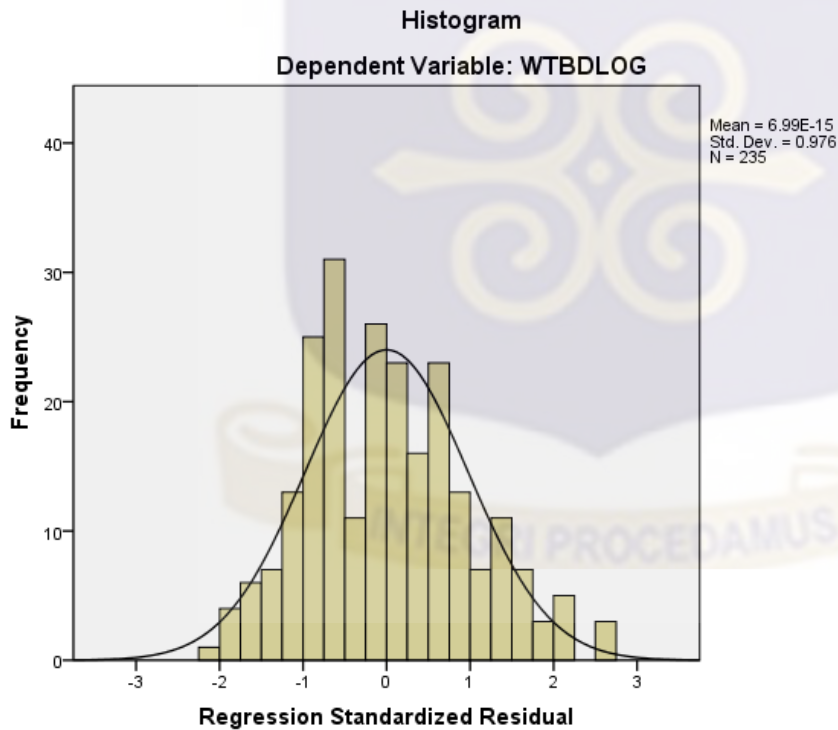
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.734	.085		20.438	.000		
ID	-.016	.027	-.039	-.603	.547	.778	1.285
Between_60_74	-.184	.047	-.397	-3.947	.000	.321	3.112
Between_75_84	-.163	.051	-.315	-3.183	.002	.332	3.013
Sex	.045	.025	.107	1.852	.065	.971	1.030
MSPSS	.001	.001	.079	1.332	.184	.913	1.096
PCS12	-.002	.001	-.113	-1.781	.076	.800	1.249
MCS12	-.007	.001	-.322	-5.073	.000	.806	1.240
2 (Constant)	1.977	.133		14.832	.000		
ID	-.015	.027	-.036	-.562	.575	.778	1.285
Between_60_74	-.178	.047	-.383	-3.795	.000	.313	3.199
Between_75_84	-.162	.051	-.313	-3.198	.002	.332	3.014
Sex	.051	.024	.120	2.089	.038	.963	1.039
MSPSS	.001	.001	.089	1.459	.146	.852	1.174
PCS12	-.002	.001	-.110	-1.729	.085	.791	1.263
MCS12	-.006	.001	-.299	-4.655	.000	.773	1.294
SEI_SS	-.007	.003	-.150	-2.442	.015	.839	1.192
MFRSS	.001	.002	.023	.359	.720	.758	1.319
3 (Constant)	2.038	.134		15.250	.000		
ID	-.001	.026	-.003	-.049	.961	.764	1.309
Between_60_74	-.156	.046	-.335	-3.362	.001	.302	3.307
Between_75_84	-.139	.050	-.268	-2.773	.006	.323	3.091
Sex	.046	.024	.108	1.901	.059	.928	1.078
MSPSS	.001	.001	.075	1.220	.224	.798	1.254
PCS12	-.002	.001	-.075	-1.199	.232	.775	1.291
MCS12	-.005	.001	-.244	-3.766	.000	.715	1.399
SEI_SS	-.003	.003	-.067	-1.032	.303	.711	1.407
MFRSS	.001	.002	.060	.937	.350	.735	1.361
MLQ_P	-.006	.003	-.157	-2.253	.025	.618	1.619
LOT_R	-.009	.003	-.173	-2.754	.006	.763	1.311

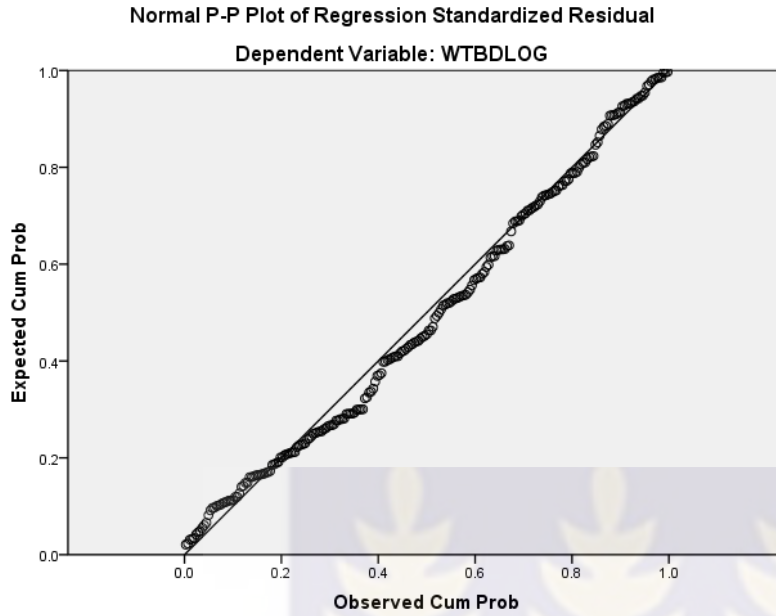
a. Dependent Variable: WTBDLOG

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.0239	1.7878	1.2393	.12094	235
Std. Predicted Value	-1.781	4.535	.000	1.000	235
Standard Error of Predicted Value	.022	.068	.039	.009	235
Adjusted Predicted Value	1.0248	1.7930	1.2398	.12172	235
Residual	-.36074	.48561	.00000	.17293	235
Std. Residual	-2.036	2.741	.000	.976	235
Stud. Residual	-2.151	2.788	-.001	1.003	235
Deleted Residual	-.40255	.50229	-.00055	.18258	235
Stud. Deleted Residual	-2.169	2.831	-.001	1.007	235
Mahal. Distance	2.707	33.539	10.953	5.551	235
Cook's Distance	.000	.045	.005	.007	235
Centered Leverage Value	.012	.143	.047	.024	235

a. Dependent Variable: WTBDLOG





Mediation

Meaning mediating spirituality-subjective well-being and spirituality-wish to die

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.345	7.450		-.852	.395
	SEI_SS	.813	.155	.325	5.240	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.383	3.240		1.044	.297
	SEI_SS	.514	.067	.447	7.622	.000

a. Dependent Variable: MLQ_P

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-10.153	6.525		-1.556	.121
	SEI_SS	.234	.152	.093	1.544	.124
	MLQ_P	1.126	.132	.518	8.552	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.696	.133		12.719	.000
	SEI_SS	-.010	.003	-.220	-3.441	.001

a. Dependent Variable: WTBDLOG

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.738	.127		13.645	.000
	SEI_SS	-.003	.003	-.070	-1.027	.305
	MLQ_P	-.013	.003	-.336	-4.928	.000

a. Dependent Variable: WTBDLOG

Optimism mediating spirituality-subjective well-being and spirituality-wish to die

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.171	2.499		5.271	.000
	SEI_SS	.204	.052	.248	3.915	.000

a. Dependent Variable: LOT_R

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	-16.738		
	SEI_SS	.652	.155	.260	4.213	.000
	LOT_R	.789	.189	.258	4.180	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	1.908		
	SEI_SS	-.006	.003	-.144	-2.287	.023
	LOT_R	-.016	.003	-.305	-4.839	.000

a. Dependent Variable: WTBDLOG

Meaning mediating religious support-subjective well-being

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	8.712		
	MFRSS	.483	.087	.341	5.529	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	19.516		
	MFRSS	.171	.041	.263	4.158	.000

a. Dependent Variable: MLQ_P

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12.708	4.405		-2.885	.004
	MFRSS	.295	.078	.208	3.799	.000
	MLQ_P	1.098	.119	.505	9.222	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.320	.080		16.423	.000
	MFRSS	-.002	.002	-.067	-1.020	.309

a. Dependent Variable: WTBDLOG

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.596	.088		18.071	.000
	MFRSS	.001	.002	.032	.506	.614
	MLQ_P	-.014	.002	-.375	-5.932	.000

a. Dependent Variable: WTBDLOG

Optimism mediating religious support-subjective well-being

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.200	1.488		12.231	.000
	MFRSS	.095	.030	.206	3.208	.002

a. Dependent Variable: LOT_R

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5.974	5.389		-1.108	.269
	MFRSS	.406	.086	.286	4.719	.000
	LOT_R	.807	.185	.264	4.358	.000

a. Dependent Variable: SWB

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.649	.097		16.958	.000
	MFRSS	8.804E-5	.002	.004	.057	.955
	LOT_R	-.018	.003	-.341	-5.414	.000

a. Dependent Variable: WTBDLOG



APPENDIX E: Correlation

Correlations

		MLQ_P	SEI_SS	MFRSS	SPANE_P	SPANE_N	SWL	WTBDLOG	LOT_R
MLQ_P	Pearson Correlation	1	.447**	.263**	.433**	-.359**	.529**	-.367**	.286**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	235	235	235	235	235	235	235	235
SEI_SS	Pearson Correlation	.447**	1	.346**	.249**	-.197**	.318**	-.220**	.248**
	Sig. (2-tailed)	.000		.000	.000	.002	.000	.001	.000
	N	235	235	235	235	235	235	235	235
MFRSS	Pearson Correlation	.263**	.346**	1	.327**	-.231**	.257**	-.067	.206**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.309	.002
	N	235	235	235	235	235	235	235	235
SPANE_P	Pearson Correlation	.433**	.249**	.327**	1	-.577**	.486**	-.317**	.256**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	235	235	235	235	235	235	235	235
SPANE_N	Pearson Correlation	-.359**	-.197**	-.231**	-.577**	1	-.	.394**	-.337**
	Sig. (2-tailed)	.000	.002	.000	.000		.000	.000	.000
	N	235	235	235	235	235	235	235	235
SWL	Pearson Correlation	.529**	.318**	.257**	.486**	-.318**	1	-.224**	.198**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.001	.002
	N	235	235	235	235	235	235	235	235
WTBDLOG	Pearson Correlation	-.367**	-.220**	-.067	-.317**	.394**	-.	1	-.341**
	Sig. (2-tailed)	.000	.001	.309	.000	.000	.001		.000
	N	235	235	235	235	235	235	235	235
LOT_R	Pearson Correlation	.286**	.248**	.206**	.256**	-.337**	.198**	-.341**	1
	Sig. (2-tailed)	.000	.000	.002	.000	.000	.002	.000	
	N	235	235	235	235	235	235	235	235

** . Correlation is significant at the 0.01 level (2-tailed).