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Burden of stress among cancer patients: Is religious commitment a factor?

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ABSTRACT

As the scientific community continues to search for cure for cancer, it is necessary to examine variables that can act as buffer against the challenges encountered by cancer patients in their daily living. This study examined religious commitment as a factor in stress among cancer patients Participants were 185 adult cancer patients aged between 23 – 75 years (M = 47.95; SD = 12.62). They were drawn from three different hospitals in Enugu and Anambra States, Nigeria. The Religious Commitment Scale (RCS) and the University of Nigeria Stress Symptoms Scale (UNSSS) were used to collect the data. It was hypothesized that religious commitment will make significant contribution to stress symptoms of cancer patients. Data was analyzed using linear regression. The findings confirmed the hypothesis, showing that religious commitment was a negative predictor of stress among cancer patients. Discussion highlighted the need to integrate the issue of faith/religious concerns in the psycho-social therapies for the management of patients with terminal illnesses.

Introduction

Over the years, researchers (McEwen, 2008; Monroe & Simons, 1991; Sher, 2003) have found the need to study the role of stress in psychopathology in general. The conceptualizations of the influence of stress on psychopathology have typically proposed that stress is one of the factors to consider as it affects three broad domains that are vital to human functioning: genetics, constitutional make up of the body, and social conditions. Due to genetic inheritance, certain individuals may have a predisposition or vulnerability to develop depression (Monroe & Simons, 1991). Studies (Affleck, Tennen, Urrows, & Higgins, 1994; Birditt, Cichy, Almeida, 2011; Hahn, Cichy, Small, & Almeida, 2014; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Naef, Ward, Mahrer-Imhof, & Grande, 2012) have shown that stress may act as a trigger to activate this predisposition, especially when individuals with low predisposition require greater levels of stress to become depressed.

A rationale for the conceptual viability of life events as critical factor in psychiatric breakdown emerges from the pioneering work of Holmes and Rahe (1967). These stress researchers studied life events clusters at disease onset of more than 5,000 patients and found that events that led to major readjustments were accompanied by disease onsets. Moreover, studies have reported that severe psychosocial stress, such as a life-threatening medical conditions and frustration of major life goals, often precede the onset of major depression (e.g., Brown & Harris, 1989; Lewinsohm, Hoberman, & Rosenbaum, 1988; Mazure, 1998; Paykel, 1982). Studies on stress have shown that when people are under stress, they often react emotionally (Affleck, Tennen, Urrows, & Higgins, 1994; Van-Eck, Nicolson, & Berkhof, 1998). Other studies have reported that chronic everyday hassles have significant harmful effect on mental health (e.g., Chang & Sanna, 2003; Delogis, Folkman, & Lazarus, 1988; Sher, 2003). Weiten (2007) reported that based on clinical impression, psychologists have long suspected that chronic distress such as HIV/AIDS, Coronary Heart Diseases (CHD), cancer and other life-threatening illnesses might contribute to many types of psychological and mental disorders. Severe life stress has been linked to accelerate the symptoms in the people who have serious illnesses including cancer and HIV/AIDs (e.g., Lesserman, Pettito, Perkins, Folds, Golden, & Evans, 1997; McEwen, 1998; 2008).

Historically, some authors (Canon, 1929; McEwan, 1998; Seyle, 1956) provided the foundation for understanding the bodily processes toward maintaining equilibrium in the face of environmental challenges. Seyle's (1956) General Adaptation Syndrome is about physiological processes associated with stress response; whereas McEwan (1998) in his 'allostasis' and allostatic load, showed how the body adapts to changing environment. Common to these theories is that severe stress, pressure, challenges, wear out the body, leading to damage to body system which may manifest as illness, and in extreme cases, death. However, there are attempts for the individuals to cope, adjust to, or deal with the stress. Lazarus and Folkman (1984) worked on the theory of cognitive appraisal which acknowledges the fact of stress from the environment, and the individual's approach to deal with it. This entails appraising one's resources and capability to deal with the stress. Religion has been shown to be a coping paradigm in the face of life-threatening situations (Aflakseir & Mahdiyar, 2016; Emmons, 2003; Bovero, Leombruni, Miniotti, & Torta, 2013; Greenstreet, 2006; King, Marston, McManus, Brugha, Meltzer, Bebbington, 2013; Koenig, Dana, Verna, 2012; Koenig, McCullough, Larson, 2001; Loewenthal, Cinnirella, Evdoka, & Murphy, 2001; Merill, Read, LeCheinant, 2009; Paloutzian, 2014; Pargament, Koenig, Tarakeshwar, Hahn, 2004).

Historically, attention has been drawn to the study of religion as a unique dimension of human life - one that cannot be reduced to other level of experience. It is a particularly new idea to study religion scientifically. William James, a secular founder of American Psychology, had a keen interest

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in religious experience and devoted an important volume to the subject (James, 1902; 1961). This volume has been influential in Psychology, Philosophy and Theology (Barnard, 1997; Hauerwas, 2001). Religion has been an important mediating factor that influences the general health of an individual (e.g., Clements & Ermakova, 2012; Koenig, 1997; Levin, 1996; George, Larson, Koenig, & McCullough, 2000; Granter, Larson, & Allen, 1991). Researchers have also identified religious commitment as a potential moderator of stress (e.g., Holt, Clark, & Klem, 2007; Bergin, Masters, & Richards, 1987). Some other studies have shown that religiosity has long been implicated as a protective factor (and occasionally a risk factor, e.g. Smith, McCullough, & Poll, 2003) in mental health research (e.g., Carpenter, Laney, & Mezulis, 2011; Koenig, McCullough, & Larson, 2001).

A number of studies have found that global indices of religious commitment (e.g., prayer, church attendance, seeing oneself as religious, strength of religious identification, personal meaningfulness of religion) are negatively related to depressive symptoms (in other words, religious commitment is related to lower depression and higher subjective well being among religious adolescents and adults (e.g., Abdel-Khalek, 2012; Lim & Puntnam, 2010; Schmittker, 2001; Wright, Frost, & Wisecarver, 1993: Witter, Stock, Okun and Haring, 1985). Researchers have found that a composite measure of prayer, religious coping, and turning to God in response to stressors predicted decreased depression in highly religious individuals and increased depression in less religious individuals (Eliassen, Taylor, & Lloyd 2005; Muo, 2013).

Studies have shown that religious commitment have proved to buffer the chances of people suffering from chronic illnesses like cardiovascular diseases, cancer, HIV/AIDS from breaking down (Brady, Peterman, Fitchet, Mo, & Cella, 1999; Ehman, Otto, Short, Ciampa, & Hansen-Fasche, 1999; Vallurupalli, Lauderdale, Balboni, Phelps, Block et al., 2012; Woods, Antoni, Ironson, & Kling, 1999). It has been reported that women with metastatic breast cancer, when they gave high ratings to the importance of spiritual expression in their life had greater numbers of white blood cells and total lymphocyte counts (Sephton, Sapolsky, Kraemer, & Spiegel, 2000). Religiosity is positively correlated with health and mental well being (Kasen, Wickramaratne, Gameroff, & Weissman, 2012; Miller, Wickramaratne, Gameroff, Sage, Tenke, and Weissman, 2012; Yohannes, Koenig, Baldwin, & Connolly, 2008).

Religiosity enables patients cope with adversity, including ill-health conditions such as cancer (Bussing, Michalsen, Balzat et al., 2009; Pargament, Koenig, Tarakeshwar, & Hahn, 2004; Shaw, Han, Kim et al., 2007; Tix, & Frazer, 1998; Yoshimoto, Ghorbani, Bear et al., 2006). However, other researchers (e.g., Dalgalarrondo, Marín-León, Botega, De Azevedo Barros, & Bosco de Oliveira, 2008; Smith, McCullough, & Poll, 2003) found adverse effect of negative religious coping on mental health which involve depression, anxiety, suicide, psychosis, substance abuse, delinquency/ crime, marital instability and personality traits among Brazilian evangelicals and spiritists. On the other hand, Immanuel and Nzenweaku (2015), as well as Zwingmann, Müller, Körber and Murken, (2008) in their research found that religion did not influence mental health of their participants.

The purpose of the present study was to investigate the contribution of religious commitment in stress symptoms among cancer patients. In this study, religious commitment is defined as going beyond superficial religiosity (mere affiliation and church attendance) toward personal conviction, strong faith, close personal relationship to the Ultimate reality (God), which manifests in perceptible behaviors (such as forgiveness, tithing, spending time with the sacred text, etc.). Lack of available studies on religious commitment and stress using Nigerian sample prompted the present researchers to undertake this study. The present study contributes to the literature on religious commitment and stress by using Nigerian sample drawn from the hospital setting. It was hypothesized that religious commitment will contribute significantly in stress symptoms in cancer patients.

Method

Participants

Participants were 185 adult cancer patients from a Federal University Teaching Hospital; a State University Teaching Hospital, and a Specialist Hospital – all located in the East of Nigeria. They comprised of 87 (47%) male and 98 (53%) female patients; age range – 23-75 (M = 47.95; SD = 12.62). Among the respondents, 48 (25.9) were single, 124 (67%) were married, and 13 (7%) were separated/divorced. Occupationally, 39 (21.1%) were employed in the public sector, 109 (58.9%) were employed in the private sector, 17 (9.2%) were students, and 20 (10.8%) were unemployed. The researchers selected the hospitals for the study because cancer patients periodically go for treatment or check-up in these hospitals. The participants were selected using cluster sampling method. The participants were diagnosed cancer patients in each of the hospitals, who were either in-patients or outpatients that attended clinic in the selected hospitals.

Instruments

Two scales were used for data collection, namely: The Religious Commitment Scale (RCS) and the University of Nigeria Stress Symptoms Scale (UNSSS).

Religious Commitment Scale (RCS)

The Religious Commitment Scale (RCS) was developed by Onyeizugbo and Eze (2011) that assess the level of a person's devotion to religious matters. Some items in the scale are: "I fast regularly", "I pay my tithes faithfully", "I participate in religious activities". The scale has 36 items. The RCS has five response options as – False, Not Really, Somehow, True, Very True. All the items except items 35 and 36 are scored in positive order. The highest score is 180; the lowest score is 36. The higher the score, the greater the religious commitment. Cronbach's α reliability of the RCS was .92. The split half reliability was .90. The RCS has one factor structure.

University of Nigeria Stress Symptoms Scale (UNSSS)

This 50-item instrument was developed by Onyeizugbo (2007). The UNSSS has a single factor scale that measures symptoms of stress from physiological, psychological and social perspectives. The UNSSS is scored on a 5-point likert type scale: 5 = always, 4 = often, 3 = sometimes, 2 = rarely, 1 = never. The UNSSS has an alpha coefficient of .91; concurrent validity of r = .56 and .58 with Spielberger's (1983) STAI, form Y-1 and Y-2, respectively. High scores indicate high stress symptoms.

Procedure

The researchers obtained permission from the authorities of the selected hospitals to allow them to conduct the research. The administration of the instruments was done in the in-patient and outpatient departments of the hospitals immediately after the selected participants completed their consent forms. The clinical folders of the participants were reviewed to know cancer patients and their appointment days

for check-up through the help of nurses on duty. The instruments were administered individually to one hundred and ninety (190) medically diagnosed cancer patients who indicated interest to participate in the study, in their respective wards (for in-patients) and on their clinic days (for outpatients) in the hospitals. The participants were encouraged to complete the inventories. The completed inventories were collected immediately before the outpatients left the hospitals with the aid of research assistants from the selected hospitals. The participants of the study were clinical population. 185 copies of the two questionnaires were properly completed and scored. The approval for this study was granted by the University of Nigeria Teaching Hospital Health Research Ethics Committee.

Design and Statistical Analysis

The design of the study was correlational. Linear regression was used for data analysis.

Results

Table 1 shows that religious commitment significantly predicted stress symptoms (B = -.21, t = -2.54, p<.012). Higher scores in the UNSSS suggests more experience of stress, thus, B indicated that a unit rise in religious commitment was associated with -.21 decrease in stress symptoms. In table 2, the R^2 (.03) suggests that religious commitment contributed 3% of the variance in stress symptoms. The F statistics of the Analysis of variance (ANOVA) was significant, F(1,183) = 6.43, p<.01. Summarily, religious commitment positively predicts stress symptoms such that as religious commitment increases, there is a tendency for stress symptoms to reduce.

Scores of restpondents were as follows: Stress symptoms = 42-183 (M = 1.15; SD = 27); and religious commitment = 38-158 (M = 1.10; SD = 23.69).

Table 1: Summary of Regression for Religious Commitment predicting Stress Symptoms

Model	*B*	*SE*	β	*t*	*p*	95%*CI*
RCS	-.21	.08	-.18	-2.54	.012	-.37, -.05

R^2 = .03; F(1,183)=6.43, p<.01.

Discussion

This study investigated the contribution of religious commitment in stress symptoms, found that religious commitment is associated with decrease in stress symptoms. The findings agree with some of the existing works (Clements & Ermakova, 2012; Holt et al., 2007; Sephton et al., 2000; Vallurupalli et al., 2012; Woods et al., 1999) who reported that religiosity has proved to buffer the chances of people suffering from chronic illnesses like cardiovascular diseases, cancer, HIV/AIDS, general stress experience and reactivity. On the other hand, the finding of this study contradicts some previous research (e.g., Dalgalarrondo et al., 2008; Smith, McCullough, & Poll, 2003) who found that found adverse effect of negative religiosity on mental health.

The focus of this research is on commitment. Participants who were convinced in their religious beliefs, and by so doing were more spiritually connected to the Ultimate Reality, were more likely to believe the Word of God that no matter the situation, they will not 'drown'. Such strong faith, coupled with behaviors that draw one away from the self to consider larger eternal realities (which the Religious Commitment Scale measures) kept the highly committed less susceptible to stress unlike the low committed who even though they attend religious functions, may do so as a social event devoid of personal commitment and passion, which robs them of potential protective shield that is inherent in religious commitment.

This study has implications for the fields of Clinical Psychology, Counseling, Psychiatry, and general health care in the country. It is very important for therapists to understand their client's religious orientation with regards to stress management. The human person is more than cells and tissues. The human person is an amalgam of body, mind and spirit. Therefore, any effective therapeutic package must take into consideration not only the materiality of the human person but the psycho-spiritual domain as well. There is a gap in this integrative approach to health-care delivery in Nigeria, and there is, therefore, a call for a paradigm shift. The researchers studied only cancer patients especially those in the hospitals in the South-East geopolitical zone of Nigeria. This may limit the extent of the generalization of the findings. This study opens possibilities for further studies. Future researches may endeavor to extend it to a larger population and other geopolitical zones of Nigeria.

References

Abdel-Khalek, A. M. (2012). Subjective well-being and religiosity: A cross-sectional study with adolescents, young and middle-age adults. *Mental Health, Religion & Culture, 15(1)*, 39-52. doi:10.1080/13674676.2010.551324

Affleck, G., Tennen, H., Urrows, S., & Higgins, P. (1994). Person and contextual features of daily stress reactivity:individual differences in relations of undesirable daily events with mood disturbances and chronic pain intensity. *Journal of Personality and Social Psychology, 66*, 329-340.

Aflakseir, A. Mahdiyar, M. (2016). The Role of Religious Coping Strategies in predicting depression among a sample of women with fertility problems in Shiraz. *Journal of Reproduction and Infertility, 17(2),* 117-122.

Barnard, G.W. (1997). *Exploring unseen Worlds: William James and the philosophy of mysticism*. Albany: State University of New York Press.

Bergin, A.E., Masters, K.S., & Richards, P.S. (1987) Religiousness and mental health reconsidered: A study of an intrinsically religious sample. *Journal of Counseling Psychology, 34(2)*, 197 – 204.

Birditt K., Cichy K., Almeida D. (2011). Age differences in exposure and reactivity to interpersonal tensions among Black and White individuals across adulthood. *Race and Social Problems, 3*, 225–239. 10.1007/s12552-011-9058-y

Bovero, A., Leombruni, P., Miniotti, M. & Torta, R. (2013). Religiosity, pain and depression in advanced cancer patients. *World Cultural Psychiatry Research Review, June,* 51-59.

Brady, M. J., Peterman, A. H., Fitchet, G., Mo, M., & Cella, D. (1999). A case for including Spirituality in quality of life measurement in Oncology. *Psycho-Oncology, 8,* 417-428.

Brown, G.W., & Harris, T.O. (1989). Depression. In G.W. Brown & T.O. Harris (eds). *Life events and illness* (Pp. 49-93). New York: Guilford Press.

Büssing, A., Michalsen, A., Balzat, H-J., Grünther, R.A., Ostermann, T., Neugebauer, E. A. M., & Mathiessen, P. F. (2009). Are spirituality and religiosity resources for patients with chronic pain conditions? *Pain Medicine, 10*, 327–339.

Cannon, W.B. (1929). Bodily Changes in Pain, Hunger, *Fear and Rage. 2nd ed*. New York: Appleton.

Carpenter, T.P., Laney, T., & Mezulis, A. (2011). Religious coping, stress, and depressive symptoms among adolescents: A prospective study. *Psychology of Religion and Spirituality*. doi:10.1037 /90023155 (May 16, 2011).

Chang, E.C., & Sanna, I.J. (2003). Experience of life hassles and psychological adjustment among adolescents: Does it make a difference if one is optimistic or pessimistic? *Personality and Individual Differences, 34*, 867-879.

Clements, A.D., & Ermakova, A.V. (2012). Surrender to God and stress: A possible link between religiosity and health. *Psychology of Religion and Spirituality, 4*(2), 93-107.

Dalgalarrondo, P., Marín-León, L. Botega, N.J., De Azevedo, B., Barros, M., & Bosco de Oliveira, H. (2008). Religious affiliation and psychiatric morbidity in Brazil: higher rates among evangelicals and spiritists. *International Journal of Social Psychiatry, 54(6),* 562-574.

Delongis, A., Folkman, S., & Lazarus, R.S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal Personality and Social Psychology, 54*, 486-495.

Ehman, J., Otto, B.B., Short, T.H., Ciampa, R.C., & Hansen-Faschen, J. (1999). Do patients want physicians to inquire about their spiritual or religious beliefs if they become greatly ill? *Archives of Internal Medicine, 159*, 1803- 1806.

Eliassen, A. H., Taylor, J., & Lloyd, D. A. (2005). Subjective religiosity and depression in the transition to adulthood. *Journal for the Scientific Study of Religion,44,* 187-199. doi: 10.1111/j.14 68 5906.2005.00275.x

Emmons, R. A. (2003). *The psychology of ultimate concerns: Motivation and spirituality in personality*. 2nd ed London: Guilford Press.

George, L.K., Larson, D., Koenig, H., & McCullough, M. (2000). Spirituality and health: What we know and what we need to know. *Journal of Social and Clinical Psychology, 19,* 102-116.

Granter, J., Larson, D.B., & Allen, G.D. (1991). Religious commitment and mental health: A review of the empirical literature. Journal of Psychology and Theology, 19, 6-16.

Greenstreet, W. (2006). *Integrating spirituality in health and social care: perspective and practical approaches*. 1st ed Oxford: Radcliffe Publishing.

Hahn, E.A., Cichy, K.E., Small, B.J. & Almeida, D.M. (2014). Daily Emotional and Physical Reactivity to Stressors among widowed and married older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 69B(1)*, 19–28.

Hauerwas, S. (2001). *With the grain of the Universe. Grand Rapids*, MI: Brazos Press.

Holmes, T.H., & Rahe, R.H. (1967). The Social readjustment rating scale. *Journal of Psychosomatic Research, 11,* 213-218.

Holt, C.L., Clark, E.M., & Klem, P.R. (2007). Expansion and validation of the Spiritual Health Locus of Control Scale. *Journal of Health Psychology, 12(4)*, 597-612.

James, W. (1902). *The varieties of religious experience: A study of human nature*. New York: Random House.

James, W. (1961). *The varieties of religious experience: A study of human nature*. Cambridge, MA: Harvard University Press. Original Work Published in 1902.

Immanuel, E. U., & Nzenweaku, J. U. (2015). Roles of spirituality and religious affiliation in mental health among persons remanded in prison custody. *Nigerian Journal of Psychological Research, 11*, 54-59.

Kasen, S., Wickramaratne, P., Gameroff, M. J. & Weissman (2012). Religiosity and resilience in persons at high risk for major depression. *Psychological Medicine, 42(3)*, 509-519.

Kiecolt-Glaser J. K., McGuire L., Robles T. F., Glaser R. (2002). Psychoneuroimmunology and psychosomatic medicine: Back to the future. *Psychosomatic Medicine, 64*, 15–28

King, M., Marston, L. McManus. S., Brugha, T., Meltzer, H., Bebbington, P. (2013). Religion, spirituality and mental health: results from a national study of English households. *British Journal of Psychiatry, 202 (1)*, 68– 73.

Koenig, H.G. (1997). *Use of religion by patients with severe medical illness. Mind/Body Medicine, 2*, 31-36.

Koenig, H.G., Dana, E.K., & Verna, B.C. (2012). *Handbook of religion and health. 2nd* ed New York: Oxford University Press.

Koenig, H.G., McCullough, M.E., & Larson, D.B. (2001). *Handbook of religion and health*. 2nd ed. New York: Oxford University Press.

Lazarus, R.S., & Folkman. S. (1984). *Stress, appraisal and coping*. New York: Springer.

Lesserman, J., Petitto, J.M., Perkins, D.O. Folds, J.D., Golden, R.N., & Evans, D.L. (1997). Severe Stress, depressive symptoms, and changes in hymphocyte subsets in human immunodeficiency virus-infected men. A 2-year follow-up study. *Archives of General Psychiatry, 54*, 279-285.

Levin, J.S. (1996). How religion influences morbidity and health: Reflections on natural history, salutogenesis and host resistance. *Social Science and Medicine, 43,* 849-864.

Lewinsohn, P.M., Hoberman, H.M., & Rosenbaum, M. (1988). A prospective study of risk factors for unipolar depression. *Journal of Abnormal Psychology, 106*, 439-448.

Lim, C., Putnam, R. D. (2010). Religion, social networks, and life satisfaction. *American Sociological Review, 75(6),* 914-933. doi:10.1177/0003122410386686

Loewenthal, K.M., Cinnirella, M., Evdoka, G., Murphy, P. (2001). Faith conquers all? Beliefs about the role of religious factors in coping with depression among different cultural-religious groups in the UK. *British Journal of Medical Psychology, 74,* 293– 303.

Mazure, C. M. (1998). Life stressors as risk factors in depression. Clinical Psychology: *Science and Practice, 5,* 291-313.

McEwen, B.S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine, 338*, 171-179.

McEwen, B. S. (2008). Central effects of stress hormones in health and disease: Understanding the protective and damaging effects of stress and stress mediators. *European Journal of Pharmacology, 583,* 174-185.

Merill, R., Read, C., LeCheinant, A. (2009). The influence of religiosity on positive and negative outcomes associated with stress among college students. *Mental Health, Religion & Culture 12(5),* 501-511. doi:10.1080/13674670902774106

Miller, L. Wickramaratne, P., Gameroff, M.J., Sage, M., Tenke, C.E. & Weissman, M.M. (2012). Religiosity and major depression in adults at high risk: a ten-year prospective study. *American Journal of Psychiatry, 169(1)*, 89–94.

Monroe, S.M., & Simons, A.D. (1991). Diathesis – Stress theories in the context of life stress research:implications for the depressive disorders. *Psychological Bulletin, 110*, 406 – 425.

Muo, F.C. (2013). *Influence of social support, age and religious commitment on depressive symptoms among cancer patients*. M.Sc. Project at the Department of Psychology, University of Nigeria, Nsukka.

Naef R., Ward R., Mahrer-Imhof R., Grande G. (2012). Characteristics of the bereavement experience of older persons after spousal loss: An integrative review. *International Journal of Nursing Studies, 10,* 10-16

Onyeizugbo, E.U., & Eze, A.O. (2011). *Religious Commitment Scale. Technical Reports*. Department of Psychology, University of Nigeria, Nsukka.

Onyeizugbo, E. U. (2007). The University of Nigeria Stress Symptoms Scale. *Nigerian Clinical Psychologists, 2,* 7-10.

Paloutzian, R.F. (2014). *Handbook of the psychology of religion and spirituality.* 2nd ed. London: Guilford Press.

Pargament, K. I, Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004). Religious coping methods as predictors of psychological, physical and spiritual outcomes among medically ill elderly patients: a two-year longitudinal study. *Journal of Health Psychology, 9 (6),* 713– 30.

Paykel, E.S. (1982*). Handbook of affective disorders*. New York: Guilford Press.

Schmittker, J. (2001). When is faith enough: The effects of religious involvement on depression. *Journal for theScientific Study of Religion, 40*, 393 – 411. doi:10.1111/0021-8294.00065.

Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.

Sephton, S. E., Sapolsky, R. M., Kraemer, H.C., & Spiegel, D. (2000). Cortisol rhythm as a predictor of breast cancer. *Journal of the National Cancer Institute, 92*, 994 – 1000.

Shaw, B., Han, J., Kim, E., Gustafson, D., Hawkins, R. P., Cleary, J. et al. (2007). Effects of prayer and religious expression within computer support groups on women with breast cancer. *Psycho-Oncology, 16(7)*, 676–687.

Sher, L. (2003). Daily hassles, cortisol, and depression. *Australia and New Zealand Journal of Psychiatry, 37*, 383 – 384.

Smith, T. B., McCullough, M., & Poll, J. (2003). Religiousness and depression: Evidence for a main effect and the moderating influence of stressful life events. Psychological Bulletin, 129(4), 614-636. doi.: 10.1037/0033-2909.129.4.614

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E., Vagg, P. R., & Jacobs, G. A. (1983). Manual for the State-Trait anxiety inventory (Form Y1 – Y2). CA: Consulting Psychologists Press. Tix, A. P., & Frazier, P. A. (1998). The use of religious coping during stressful life events: main effects, moderation, and mediation. *Journal of Consulting and Clinical Psychology, 66(2),* 411–422.

Van–Eck, M., Nicolson, N.A., & Berkhof, J. (1998). Effects of stressful daily events on mood states: Relationships to global perceived stress. *Journal of Personality and Social Psychology, 75*, 1572 – 1585.

Vallurupalli, M., Lauderdale, K., Balboni, M.J., Phelps, A. C., Block, S. D., et al. (2012). The role of spirituality and religious coping in the quality of life of patients with advanced cancer receiving palliative radiation therapy. *Journal of Supportive Oncology, 10(2)*, 81–87.

Weiten, W. (2007). *Psychology: Themes and Variations (7th Ed.).* Boston, United States: Thomson Learning, Inc.

Witter, R. A., Stock, W. A., Okun, M. A., Haring, M. J. (1985). Religion and subjective wellbeing in adulthood: A quantitative synthesis. *Review of Religious Research, 26(4),* 332-342.

Woods, T. E., Antoni, M.H., Ironson, G.H., & Kling, D.W. (1999). Religiosity is associated with affective and immune status in symptomatic HIV – infected gang men. *Journal of Psychosomatic Research, 46*, 165 – 176.

Wright, L.S., Frost, C.J., & Wisecarver, S.J. (1993). Church attendance, meaningfulness of religion, and depressive symptomology among adolescents. *Journal of Youth and Adolescence, 22*, 559-568, doi:10.1007/BFo1537716.

Yohannes AM, Koenig HG, Baldwin RC, Connolly MJ. (2008). Health behaviour, depression and religiosity in older patients admitted to intermediate care. *International Journal of Geriatric Psychiatry, 23*, 735-740.

Yoshimoto, S. M., Ghorbani, S., Baer, J. M., Cheng, K. W., Banthia, R., Malcarne, V. L., Sadler, G. R., Ko, C. M., Greenbergs, H.L., & Varni, J. W. (2006). Religious coping and problem-solving by couples faced with prostate cancer. *European Journal of Cancer Care, 15,* 481-488.

Zwingmann, C., Müller, C., Körber, J. & Murken, S. (2008). Religious commitment, religious coping and anxiety: A study in German patients with breast cancer. *European Journal of Cancer Care 17,* 361–370