THE MEDIATING ROLE OF SENSE OF COHERENCE BETWEEN RELIGIOSITY AND QUALITY OF LIFE AMONG UNDER TREATMENT CANCER PATIENTS

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Original Article

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Abstract

The cross-sectional study aimed to scrutinize the mediating role of a sense of coherence in the relationship between religiosity and quality of life among undertreatment cancer patients. The purposive sample of 250 under treatment cancer patients aged 18-65 (46.33±12.6) years was selected from different hospital's oncology departments. To collect data, WHOQOL-brief, a Short Muslim practices and belief questionnaire and a sense of coherence scale along with a demographic information sheet were used. Information was analyzed using SPSS 22. Results showed that religiosity, quality of life and sense of coherence are positively correlated with each other. Religiosity had a positive significant direct effect on the quality of life (p<0.001) and the significant indirect effect of religiosity through the need for a sense of coherence was positive (p<0.001). It was concluded that religiosity increases the sense of coherence which in turn increases the quality of life of cancer patients. Study results have significant practical and theoretical implications.

Keywords: Sense of Coherence, Religiosity, Quality of Life

Introduction

Cancer is becoming a common disease nowadays. There is a set of over 100 diseases sharing many elements in common with cancer. There are more than 200 types of cancer, but depending on malignancy, it can be divided into four main groups that are carcinomas, sarcomas, leukaemias and lymphomas (Brannon & Feist, 2000).

A variety of symptoms are experienced by cancer patients. Individuals suffering from cancer might have disturbed daily activities if the symptoms of cancer are not managed adequately and may hinder their performance (Nayak, George, Vidyasagar, Mathew, Nayak, Nayak, & Kamath, 2017; Paleri, Kumar, & Thankam, 2005). Many empirical research have discovered that cancer symptoms have the greatest impact on a patient's quality of life. Together with diminished physical and sociocultural functioning, higher levels of expressive suffering have been accompanied with more symptoms, which have an impact on overall QOL. Hence, surgical control of symptoms can enhance the quality of life for cancer patients (Heidrich, Egan, Hengudomsub, & Randolph, 2006).

In addition, religiosity is also another contributing factor in the lives of people who are suffering from chronic illness to confront any trauma. Because religiosity affects a people's beliefs. A

high degree of religious belief can enhance the coping skill of an individual to deal with the psychological consequences of a chronic illness like cancer. Religiosity is an important factor for many people in managing a disease like cancer (Feher, & Maly, 1999; Salsman, Fitchett, Merluzzi, Sherman, & Park, 2015). As cancer advances, the thinking of Patients diverts from materialism to religion as well as spirituality to increase association with Allah (Weaver & Flannelly, 2004; McFarland, Pudrovska, Schieman, Ellison, & Bierman, 2013). Religiosity has been increased within the personality of an individual in an intangible way (Norrander & Wilcox, 2008; Villani, Sorgente, Iannello, & Antonietti, 2019). It also stated that aspects of religiosity are closely related to mental health, physical health, behavioural outcomes and overall quality of life of patients. In a study on cancer, it was reported that when patients were diagnosed with cancer they became more religious. As they feel satisfied in believing in GOD. And when the cancer patients in the last stage were asked that how and what maintains their quality of life their answers were the relationship with God helps them to maintain quality of life and pain relief (Weaver & Flannelly, 2004; Lewandowska, Rudzki, Lewandowski, Próchnicki, Rudzki, Laskowska, & Brudniak, 2020; Rahnama, Khoshknab, Maddah, & Ahmadi, 2012). About 84 Muslim breast cancer patients, hospitalised to Ahvaz Shafa Hospital in Iran between 2015 and 18 were the subject of a study (Zargani, Nasiri, Hekmat, Abbaspour, & Vahabi, 2018) indicated that religiosity is strongly and favourably correlated with breast cancer patients' quality of life.

It is crucial to pay close attention to the patients' sense of coherence (SOC), which is an internal resource that influences the relationship between religiosity and quality of life and acts as a protective factor during the adaption process. Particularly, SOC is defined as the global orientation in which individuals can get trust from their surrounding environment where they can make life explainable, predictable and sore reflecting the degree to which an individual has an enduring, however peculiar sense of trust that the stimuli getting from one's external or internal surroundings the whole life is explicable, predictable and structured (Bonelli, Dew, R. Koenig, Rosmarin, & Vasegh, 2012). It would appear, according to the salutogenic model, that people having a higher level of religiosity robust SOC and as a result deal better with stressful events, and as a consequence of which, they get positive health outcomes (Eriksson, 2006; Lorenz, Doherty, & Casey, 2019) and hence improves the quality of life (Anyfantakis, Symvoulakis, Linardakis, Shea, Panagiotakos, & Lionis, 2015). The current study was designed to examine the impact of religiosity on quality of life and the mediating role of SOC between religiosity and quality of life, keeping in mind the backdrop of the literature review underlining the importance of constructs.

Subjects and Methods

The cross-sectional study was conducted from May 2019 to October 2019 and purposively selected 250 in-patients diagnosed with cancer (106 females and 144 males, aged 18-65; 46.33±12.6) with different stages and types from different hospitals in Lahore, Faisalabad and Sargodha cities included in the study. The sample minimum qualification was middle school, were diagnosed as cancer patients after a thorough examination by doctors and were under treatment for more than six months. Those not meeting the inclusion criteria on any count were excluded.

Instruments

Short Muslims practices and Beliefs Questionnaire (AlMarri, Oei & Al-Adawi., (2009) comprised of 9 items was used to measure religiosity by summing up the responses of all the items on is 5 points Likert scale where 5 = *always*, and 1 = *never.* It has subscales. Items 1-4 measure Muslims' practices with an alpha of .76 and items 6-9 measure Muslims' beliefs with an alpha of .80.

Sense of Coherence Scale (SOC 13; Antonovsky, A. 1987), consisted of 13 items with 3 subscales i.e., comprehensibility (items no. 2, 6, 8, 9, & 11), manageability (items no. 3, 5, 10, & 13), and Meaningfulness (items no. 1, 4, 7, & 12) which are rated on 7-point Likert type response pattern. Reverse scored items are 1, 2, 3, 7, and 10. Alpha reliability of subscales was as comprehensibility .80, manageability.78, and meaningfulness .71.

Quality of Life brief scale (Group, 1998) consisted of 26 items further divided into 4 subscales with 5 point ratings i.e, the overall quality of life and general health (items no. 1 & 2), physical health (items no. 3, 4, 10, 15,16, 17 & 18), psychological health (items no. 5, 6,7, 11, & 12)**.** Alpha reliability of the quality of life brief scales was .91.

Procedure

The study was initially approved by the ethics review committee of the Department of Psychology, University of Lahore (Ref/UOL/Psy-790). Afterwards, with the permission of hospital authorities, the medical histories of the participants were examined and only those were contacted who meet the inclusion criteria. As fulfilment of ethical research parameters debriefing, informed consent (verbal + written), and confidentiality assurance were taken into account. Participants were formally elucidated about the current study objective and were informed about their right to leave the research in case of any discomfort at any stage however, they were informed that participation in the current study is purely voluntarily and does not lead to any psychological, physical, emotional or economical harm. They were instructed about the response recording criteria and were requested to provide genuine responses. The questionnaire booklet comprised of the demographic information sheet, Short Muslims practices and Beliefs Questionnaire, Sense of Coherence (SOC 13) scale and Quality of Life questionnaire were handed over to the participants who agreed to participate and responses were recorded. The average time was recorded to be 20 minutes. All the participants were thanked at the end of data collection and collected data was analyzed using SPSS 22.

Analysis Plan

Descriptive statistics which include mean, standard deviation, range, skewness, and Cronbach alpha reliabilities for all the measuring instruments were calculated for assessing the psychometric properties of instruments. Multiple regression analysis was carried out to assess the effect of religiosity on quality of life. Path analysis was done using IBM SPSS Process (version 22).

Results

The sense of coherence and quality of life were positively correlated with religiosity, including Muslim beliefs and behaviours. Also, cancer patients' quality of life was favourably correlated with their sense of coherence (Table-1).

The quality of life, including physical health, psychological health, social relationships, and environment, were significantly predicted by religiosity, including Muslim beliefs and practises (Table-2). Also, the sense of coherence's mediation role in the connection between religion and quality of life was explored (Table- 3). Religiosity had a significant indirect effect on the quality of life. The R^2 value of .28 indicates that religiosity explained 28% variance in sense of coherence with [F (1, 248) = 95.92, $p < .001$]. The R^2 value of .57 indicates that sense of coherence and religiosity explained 57% variance in quality of life with [F (2, 247) = 166.99, $p < .001$]. Sobel's Z value of 7.80, $p < .001$ confirmed the mediating effect of a sense of coherence between religiosity and quality of life.

Table 1

Pearson correlation among all study variables (N = 250)

Variables	2	3	4	5	6	7	8	9	10	11	12
Muslim practices	.49**	.84**	.51**	.28**	.42**	.49**	.52**	.48**	.50**	.47**	.52**
Muslim beliefs		.88**	.43**	.16*	.48**	.43**	.40**	.32**	.29**	.45**	.41**
Religiosity			.54**	.25**	.52**	.53**	.53**	.46**	.45**	.53**	.53**
Comprehensibility				.45**	.83**	.93**	.83**	.84**	.74**	.79**	.84**
Manageability					.35**	.70**	.27**	.28**	.29**	.25**	.28**
Meaningfulness						.87**	.67**	.63**	.52**	.71**	.69**
Sense of coherence							.73**	.72**	.64**	.72**	.74**
Physical health								.97***	.93***	95***	.90***
Psychological healt									.94**	.86***	.95***
Social relation										.82***	.92***
Environment											.96***
Quality of life											

Note: ****p*<.001; ***p*<.01; **p*<.05

Table 2

Multiple regression analysis showing the effect of subscales of religiosity i.e., Muslim practices and Muslim beliefs on the prediction of Physical health, Psychological health, Social relation, and Environment among cancer patients (N = 250)

	Quality of life											
	Physical health			Psychological health			Social relations			Environment		
Variables	*β*	*R2*	*F*	*β*	*R2*	*F*	*β*	*R2*	*F*	*β*	*R2*	*F*
Muslim practices	.43***	.294	52.93***	.42***	.23	38.29***	.47***	.245	41.49***	.33***.	281	49.71***
Muslim beliefs	.18**			.11			.06			.29***		

Table 3

Direct and Indirect Effect of Religiosity on quality of life through Sense of coherence (N =250)

Effects	*B*	95% CI	
		LL	*UL*
Total	1.97***	1.58	2.36
Direct	.73***	.37	1.08
Indirect	1.24***	.96	1.53

Note. [a]Sobel's Z = 7.80; ****p* < .001

Discussion

The goal of the current study was to examine the relationships among religiosity, quality of life, and feeling of coherence in a sample of 250 cancer patients, both males and females, who were undergoing treatment. A significant positive association between religion, quality of life, and coherence was found using Pearson correlation analysis. Also, it was discovered that a greater feeling of coherence reinforces the beneficial relationship between religion and quality of life for cancer patients.

Religiosity is an important variable that plays an imperative part in the quality of life and a study by Zargani, et al (2018) confirmed a strong link between religiosity and quality of life for breast cancer patients. Religion was crucial to their general quality of life and to leading a normal life (Moreira-Almeida, Pinsky, Zaleski, & Laranjeira, 2010; Azam, Aslam, Basharat, Mughal, Nadeem, & Anwar, 2021).

In many studies, it was shown that a sense of coherence is important in predicting quality of life. According to the theoretical perspective of Antonovsky (1987), a high sense of coherence produces confrontation resources, which makes a person fight with life stresses. Religion is playing a role in genetic as well as dispositional factors (Knotts, 2000). As assumed by the Antonovsky sense and said that coherence works as a mediator between resources on mental functioning and exterior stressor. A mediation variable clarifies the connection between the free predictor and the needy variable. This shows how or why there is a connection between two variables. One of the health-promoting resources is a Sense of coherence which strengthens an individual's capacity in dealing with environmental strain and stressful situations (Eriksson, 2006; Lorenz, Doherty, & Casey, 2019). Empirical evidence yield that the sense of coherence has shown mediating effect with different variables in the different samples (Rohani et al, 2015), according to the study's findings, sense of coherence served as a bridge between quality of life and religiosity. The results point to the possibility that a higher feeling of coherence may act as a protective mediator for quality of life aspects during the psychological adjustment to cancer. Future investigations into this relationship may use this study as a major source of information. The study's findings indicate that among cancer patients as a whole, religiosity is associated with the highest level of coherence. It appears that their society's strong religious beliefs give people a strong sense of coherence, including meaningfulness, manageability, and comprehensibility even in trying times, which improves the quality of life for cancer patients who are still receiving treatment.

Conclusion & Implications

The findings indicate that the associations between religiosity and quality of life were strongly mediated by a sense of coherence. In the literature, empirical data backed up these findings. These findings also emphasize the need for medical professionals, health psychologists, and policymakers to concentrate on identifying the potential value of religious coping and quality of life regarding the patient's level of sense of coherence and incorporating them into intervention plans starting with the first visit during the pre-diagnosis period onward.

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References

AlMarri, Oei & Al-Adawi., (2009). The development of the Short Muslim Practice and Belief Scale. *Mental Health Religion & Culture* *12*(5), 415-426

Antonovsky, A. (1987). Health promoting factors at work: the sense of coherence. *Psychosocial factors at work and their relation to health*, 153-167

Anyfantakis, D., Symvoulakis, E. K., Linardakis, M., Shea, S., Panagiotakos, D., &Lionis, C. (2015). Effect of religiosity/spirituality and sense of coherence on depression within a rural population in Greece: the Spili III project. *BMC psychiatry*, *15*(1), 173.

Azam, M., Aslam, M., Basharat, J., Mughal, M. A., Nadeem, M. S., & Anwar, F. (2021). An empirical study on quality of life and related factors of Pakistani breast cancer survivors. Scientific reports, 11(1), 1-11.

Bonelli, R., Dew, R. E., Koenig, H. G., Rosmarin, D. H., &Vasegh, S. (2012). Religious and spiritual factors in depression: review and integration of the research. *Depression research and treatment*, *2012*.

Brannon, L., &Feist, J. (2000). Health Psychology: *An introduction to Behavior and Health,*ed. Belmont, CA: Wadsworth/Thomson Learning.

Eriksson, M. (2006).Contextualizing salutogenesis and Antonovsky in public health development. *Health promotion international*, *21*(3), 238-244

Feher, S., & Maly, R. C. (1999).Coping with breast cancer in later life: The role of religious faith. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, *8*(5), 408-416.

Group, T. W. (1998). The World Health Organization quality of life assessment (WHOQOL): development and general psychometric properties. *Social science and medicine*, *46*(12), 1569-1585.

Heidrich, S. M., Egan, J. J., Hengudomsub, P., & Randolph, S. M. (2006, March). Symptoms, symptom beliefs, and quality of life of older breast cancer survivors: A comparative study. *Oncology Nursing Forum, 33*(2).

Knotts, T. L. (2000). Religious involvement and dispositional characteristics as predictors of work attitudes and behaviours. Louisiana Tech University.

Lewandowska, A., Rudzki, G., Lewandowski, T., Próchnicki, M., Rudzki, S., Laskowska, B., & Brudniak, J. (2020). Quality of life of cancer patients treated with chemotherapy. International Journal of Environmental Research and Public Health, 17(19), 6938.

Lorenz, L., Doherty, A., & Casey, P. (2019). The role of religion in buffering the impact of stressful life events on depressive symptoms in patients with depressive episodes or adjustment disorder. International journal of environmental research and public health, 16(7), 1238.

McFarland, M. J., Pudrovska, T., Schieman, S., Ellison, C. G., & Bierman, A. (2013). Does a cancer diagnosis influence religiosity? Integrating a life course perspective. Social science research, 42(2), 311-320.

Moreira-Almeida, A., Pinsky, I., Zaleski, M., &Laranjeira, R. (2010).Envolvimentoreligioso e fatoressociodemográficos: resultados de um levantamentonacional no Brasil. *Rev PsiqClín*, *37*(1), 12-5.

Nayak, M. G., George, A., Vidyasagar, M. S., Mathew, S., Nayak, S., Nayak, B. S., ... & Kamath, A. (2017). Quality of life among cancer patients. Indian journal of palliative care, 23(4), 445.

Norrander, B., & Wilcox, C. (2008).The gender gap in ideology.*Political Behavior*, *30*(4), 503-523. DOI: 10.1007/s11109-008-9061-1

Paleri, A., Kumar, S., &Thankam, K. (2005).Principles of palliative care: Manual for palliative care. *Polit Behavior*, *30*(4), 503-523. DOI: 10.1007/s11109-008-9061-1

Rahnama, M., Khoshknab, M. F., Maddah, S. S. B., & Ahmadi, F. (2012). Iranian cancer patients' perception of spirituality: a qualitative content analysis study. BMC nursing, 11(1), 1-8.

Rohani, C., Abedi, H. A., Sundberg, K., & Langius-Eklöf, A. (2015). Sense of coherence as a mediator of health-related quality of life dimensions in patients with breast cancer: a longitudinal study with prospective design. Health and quality of life outcomes, 13(1), 1-9.

Salsman, J. M., Fitchett, G., Merluzzi, T. V., Sherman, A. C., & Park, C. L. (2015). Religion, spirituality, and health outcomes in cancer: A case for a meta-analytic investigation. Cancer, 121(21), 3754-3759.

Villani, D., Sorgente, A., Iannello, P., & Antonietti, A. (2019). The role of spirituality and religiosity in subjective well-being of individuals with different religious status. Frontiers in psychology, 1525.

Weaver, A. J., & Flannelly, K. J. (2004).The role of religion/spirituality for cancer patients and their caregivers.*Southern Medical Journal*, *97*(12), 1210-1214.

Weaver, A. J., & Flannelly, K. J. (2004).The role of religion/spirituality for cancer patients and their caregivers.*Southern Medical Journal*, *97*(12), 1210-1214.

Zargani, A., Nasiri, M., Hekmat, K., Abbaspour, Z., & Vahabi, S. (2018). A Survey on the Relationship between Religiosity and Quality of Life in Patients with Breast Cancer: A Study in Iranian Muslims. *Asia-Pacific journal of oncology nursing*, *5*(2), 217.