RESEARCH ARTICLE

Religious Coping and Quality of Life in Women with Breast Cancer

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Abstract

 <u>Background</u>: The aim of this study was to assess the predictive role of religious coping in quality of life of breast cancer patients. <u>Materials and Methods</u>: This multi-center cross-sectional study was conducted in Tehran, Iran, from October 2014 to May 2015. A total of 224 women with breast cancer completed measures of socio-demographic information, religious coping (brief RCOPE), and quality of life (FACT-B). Data were analyzed using descriptive statistics and the t-test, ANOVA, and linear regression analysis. <u>Results</u>: The mean age was 47.1 (SD=9.07) years and the majority were married (81.3%). The mean score for positive religious coping was 22.98 (SD=4.09) while it was 10.13 (SD=3.90) for negative religious coping. Multiple linear regression showed positive and negative religious coping as predictor variables explained a significant amount of variance in overall QOL score (R^2=.22, P=.001) after controlling for socio-demographic, and clinical variables. Positive religious coping was associated with improved QOL (β=0.29; p=0.001). In contrast, negative religious coping was significantly associated with worse QOL (β=-0.26; p=0.005). <u>Conclusions</u>: The results indicated the used types of religious coping strategies are related to better or poorer QOL and highlight the importance of religious support in breast cancer care.

Keywords: Negative religious coping - positive religious coping - quality of life - breast cancer

Introduction

Breast cancer is the most common malignancy in women worldwide which has accounted for about forty-six thousand deaths in 2013 (Khoramirad et al., 2014). Breast cancer is one of the most common cancers in women in both developed and developing countries. It was reported that there were about 1.38 million people diagnosed with breast cancer and ~458, 000 deaths result from breast cancer each year (Niu et al., 2013). The incidence of breast cancer in young women has increased in Asian population (Keramatinia et al., 2013). breast cancer affects women about 10 years earlier than their western counterparts and more aggressive disease is for younger age groups (Afsharfard et al., 2013). In Iran, the incidence rate of female breast cancer was 22 per 100,000 populations. The prevalence in this same population was 120 per 100,000 in 2006 (Montazeri 2008; Harirchi et al., 2011).

The survival rate of women with breast cancer has increased due to effective available treatments but many of patients suffer from several psychosocial complications such as depression, anxiety, stress and body image change (Alacacioglu et al., 2013; Chang et al., 2013; Tuncer and Yucel 2013; Hassan et al., 2015) which can

impair quality of life (QOL) in these patients (Knott et al., 2012). Psychosocial problem is a major challenge in patients with cancer. It is described as "*multi factorial unpleasant emotional experience of a psychological, social and spiritual nature that may interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment*" (Khalili et al., 2013). QOL is a multidimensional construct involving aspects of individuals' physical, emotional, and social wellbeing (Teo et al., 2015). Consequently, the strategies that patients use to cope with these challenges can be important in predicting their QOL.

Religious coping is an important strategy that could be used to cope with stressful situations (Ano and Vasconcelles 2005). It is described as "*the use of cognitive and behavioral techniques, that help a person cope with or adapt to difficult life situations or stress.*" (Pargament 2001). Religious coping is a multidimensional construct and can have both positive and negative effects on outcomes (Pargament et al., 1998); So not all religious coping strategies are useful and adaptive. Positive religious coping is thought to be associated with benefits in psychosocial adjustment such as "*solve one's problems in collaboration with God*" and "*search for help and comfort*

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in religious literature" whereas negative religious coping leads to poorer consequences and is therefore considered maladaptive such as "*the belief in a punitive God*" and "*delegate God to solve one's problems*" (Pargament et al., 2004).

In several studies religious coping has been consistently found to be an important coping resource affecting QOL in life threatening illnesses including breast cancer (Zwingmann et al., 2006) hemodialysis (Ramirez et al., 2012), chronic pain (Rippentrop et al., 2005), and cancer (Enjedany et al., 2010; Vallurupalli et al., 2012), breast cancer (Gaston-Johansson et al., 2013) pulmonary disease (Burker et al., 2004), and HIV (Trevino et al., 2010). However limited research on the impact of religious coping on quality of life in breast cancer patients exist in Iran. Recently, Zamanian et al. evaluated 101 cancer patients and found that religiousness and spirituality were positively associated with quality of life and mental health (Zamanian et al., 2010). In another study, Taheri Kharameh et al. found that the religious dimension of spirituality was positively associated with health-related quality of life (Kharame et al., 2014).

Quality of life could be related to religion and culture, but rare studies have evaluated the relationship between religious coping and quality of life among patients with breast cancer in Muslim countries such as Iran. The purpose of this study was to assess the role of religious coping in predicting quality of life in women with breast cancer.

Materials and Methods

Design and patients

Patients were recruited between October 2014 to May 2015 at three cancer centers in Tehran. 224 women with breast cancer referred to these cancer centers were selected via convenience sampling method. Eligibility criteria included a confirmed diagnosis of cancer of more than one month, age 18 years or older, and ability to communicate in Persian. Those who had a history of psychiatric disorder, or had metastatic brain disease were all excluded from the study. Data were collected by face-to-face interview.

We used a three-part questionnaire as follows

A questionnaire was used to collect clinical and socio-demographic information. The questionnaire consisted

Table 1. Clinical and Socio-Demographic Information of the Study Sample (n = 224)

Characteristics		
Age		
Age (years), Mean ± SD (Minimum - Maximum)	47.06 ± 9.07(19- 75)	
Educational status n (%)		
Illiterate	22	9.8
Primary	51	22.8
Secondary	38	17
High school	71	39.1
University	42	18.7
Marital status n (%)		
Single	15	6.7
Married	182	81.3
Divorced/ widowed	27	12
Employment status n (%)		
Employed	37	16.5
Unemployed/housewife	187	83.5
Place of living n (%)		
Urban	199	88.8
Rural	25	11.2
Comorbidity n (%)		
No	139	62.1
Yes	85	37.9
Income level n (%)		
Poor	126	47.3
Intermediate	84	42.1
Good	14	10.6
Body mass index n (%)		
Normal weight (BMI 18.5–24.9)	73	32.6
Overweight (BMI 25.0–29.9)	88	39.3
Obesity (BMI 30.0–39.9)	63	28.1
Family history of cancer n (%)		
No	163	72.7
Yes	61	27.3
Time since cancer diagnosis(wk) Mean ± SD	43.85± 37.67	
treatment n (%)		
Chemotherapy	138	61.6
Radiotherapy	90	40.1
Mastectomy	61	26.8

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of questions about age, marital status, educational status, economic and status employment, comorbidity, body mass index (BMI), breast cancer diagnosis history, time on cancer diagnosis, family history of a malignant disease and type of treatment.

QOL was measured using the Functional Assessment of Cancer Therapy-Breast Cancer (FACT-B). The FACT-B has 36 items in five subscales: physical well-being (7 items), social/ family well-being (7 items), emotional well-being (6 items), functional well-being (7 items), and the breast cancer subscale (9 items). The physical well-being, functional well-being, social/family well-being, and emotional well-being were added together to form the FACT-General score (FACT-G). The physical well-being, functional well-being, and breast cancer subscale were added together to form the Trial Outcome Index (FACT-B TOI). Finally, the FACT-G and BCS scores were added together to form the FACT-B total score. Each item was rated on a five point scale (0= not at all; 1= a little bit; 2= somewhat; 3= quite a bit; 4= very much). the total score and the subscale score for well-being are calculated. Higher scores indicate better functional status. Previous evaluations of the original as well as the Persian version of FACT-B indicated good reliability and validity (Sanchez et al., 2011; Patoo et al., 2015).

Religious coping was measured using the Brief Religious Coping (RCOPE). It is a 14-item questionnaire that was developed by Pargament in older US populations. The instrument categorizes religious coping in to 7 positive attributes (e.g. looked for a stronger connection with God) and 7 negative attributes (e.g. questioned God's love for me). Each attribute is rated on a four point Likret scale ranging from 1 to 4 (1=not at all, 2= rarely, 3=

sometimes, and 4=a great deal) (Pargament et al., 2000). (GHIAMI 2005)

Ethical issues

All ethical issues were considered based on the tenets of the Declaration of Helsinki. All patients were included after obtaining informed consent. Participation in this study was voluntarily and patients could leave the study any time without any effect on their treatment process. The study was approved by the ethical committee of the Tehran University of Medical Sciences.

Statistical analysis

All Statistical analyses were performed using SPSS version 16. Descriptive statistics were used to explore the data. Independent t-test, one-way analysis of variance was used for comparison. Pearson correlation was used to assess the relationship between religious coping and health-related quality of life. Multiple linear regression was used to examine if positive and negative coping significantly predict quality of life after controlling socio-demographic and clinical variables such as age, marital status, education, income, time since cancer diagnosis, family history of cancer and treatment type. A p-value of 0.05 or less was considered as statistically significant.

Results

Patient characteristics:

Information on demographic and clinical characteristics is presented in Table 1. The mean age of patients was 47.06 (SD=9.07) years. A large number of the subjects were married (81.3), had completed a higher education degree (39.1%), were not employed (83.5%), had not a family history of cancer (72.7%).

Patients quality of life and religious coping:

The mean scores for QOL and religious coping variables are presented in Table 2. The mean total QOL score was 105.02±22.76. The mean score for positive and negative religious coping were 22.98±4.09 and 10.13±3.90 respectively.

Relationships between positive and negative religious coping and QOL:

As Table 3 shows, negative religious coping had reverse significant correlation with most of quality of life domains consisting of emotional well-being, functional well-being and FACT-B. There was a significant positive correlation between positive religious coping and the

Table 2. Descriptive Statistics for Quality of life and Religious Coping

	Mean	SD	Possible score range
Religious coping *			
Positive	22.98	4.09	7-28
Negative	10.13	3.9	7-28
Quality of life scores**			
Physical well-being	17.03	6.7	0-28
Social/Family well-being	19.53	5.17	0-28
Emotional well-being	14.81	5.24	0-24
Functional well-being	18.24	5.15	0-28
FACT-G	69.63	16.7	0-108
FACT-B BCS	21.47	5.6	0-36
FACT-B TOI	14.14	5.25	0-20
FACT-B Total	105.02	22.76	0-164

Table 3. Pearson Correlations among Quality of Life and Religious Coping

	Physical well-being	Social/Family well-being	Emotional well-being	Functional well-being	FACT-G	FACT-B BCS	FACT-B TOI	FACT-B Total
Positive religious coping	0.06	.14*	.13*	.16*	.16*	0.05	0.05	0.13
Negative religious coping	-0.08	-0.06	-.18**	-.12*	-0.15	-.21**	-.14*	-.19**

* Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level

Table 4. The Results Obtained from Multiple Linear Regression

	FACT-G			FACT-B		
	β	t	P	B	t	P
Education	0.06	0.66	0.51	0.122	1.207	0.23
Residence status	-0.06	-0.63	0.524	-0.031	-0.337	0.737
Place of living	0.02	0.2	0.837	0.065	0.689	0.492
income	0.13	1.39	0.166	0.165	1.698	0.093
Familial cancer history	-0.11	-1.17	0.242	-0.036	-0.389	0.698
Positive religious coping	0.29	3.18	0.002	0.299	3.27	0.001
Negative religious coping	-0.22	-2.4	0.018	-0.264	-2.89	0.005

domains of quality of life excepting physical well-being and FACT- B.

To assess the relationship between quality of life and religious coping with controlling Confounding variables, liner regression analysis was performed. Main scales of QOL were treated as dependent variable and religious coping as well as socio-demographic and clinical variables were considered as independent factors. Religious coping as well as the variables with $p \leq 0.20$ in univariate liner regression analysis were entered in multiple logistic regression models as predictor variables. The results of multivariate regression model revealed that positive and negative religious coping as predictor variables explained a significant amount of variance of overall QOL score ($R^2=0.22$, P=0.001). Positive religious coping was related to improved QOL in both main scales of FACT-G (β=0.29; p= 0.002) and FACT-B (β=0.29; p=0.001). In contrast, negative religious coping was significantly associated with worse QOL in both scales of FACT-G (β=-0.22; p=0.01) and FACT-B (β=-0.26; p=0.005) after controlling for socio-demographic, and clinical variables. Table 4 presents the results for two separate scales.

Discussion

The relationship between negative religious coping and QOL scores suggests that breast cancer patients with negative religious behaviors or cognitions to cope cancer stress, such as feelings of being abandoned or punished by God or their church, or questioning God's love or devotion, may have poorer QOL. Conversely, the relationship between positive religious coping and QOL scores suggest that those who look to God for strength and love may have better QOL.

Cancer destroys not only the physical well-being of the patients but also threatens the social, functional, and emotional well-being of the patients. This condition causes the patients to ask about themselves, their meaning in life, sense of disconnectedness with religious community and a unstable relationship with God. Our study findings are consistent with previous studies in populations facing advanced illness such as in AIDS patients, advanced cancer (Vallurupalli et al., 2012), schizophrenia (Rammohan et al., 2002), epilepsy (Tedrus et al., 2013), asthma (Cotton et al., 2012), and in breast cancer. Hebert et al. (2009) in their study among women with breast cancer in Pittsburgh reported negative religious coping methods predict worse mental health and life satisfaction in women with breast cancer. In 2006, Tarakeshwar et al. carried out a study with

170 patients with advanced cancer and reported greater use of negative religious coping was related to poorer overall QOL (Tarakeshwar et al., 2006). Tedrous indicated negative coping is associated with a reduced quality of life (Tedrus et al., 2013). In a cross-sectional study of 69 patients with advanced cancer, religious coping were associated with improved QOL in multivariate analyses.

Some studies found no significant correlation between positive religious coping and QOL that this is incongruent with present study (Yi et al., 2006). However, negative religious coping is more consistently predictive of health outcomes than is positive religious coping.

In conclusion, the findings from the study highlight the importance of religious coping in QOL of breast cancer patients. Positive religious coping predicts better QOL while negative religious coping predicts worse quality of life in women with breast cancer. This indicates the need to psycho-religious support of patients to use positive religious coping styles more along with other psychosocial supports in breast cancer patients.

Limitations of the study: Several limitations of this research should be noted. This cross-sectional study did not allow for measurement of QOL over time. Non-random sampling reduces generalizability of the findings of this study. Longitudinal studies considering other related variables, such as spiritual well-being and cancer coping is suggested to have better understanding of the effect of religious coping on patient's quality of life. Despite these limitations, the current study appears to be unique since we assessed the QOL, religious coping and their association among breast cancer patients in an Islamic context.

Acknowledgements

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