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Self-Care in Iranian Cancer Patients: The Role of Religious Coping

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Abstract Religious and spiritual practices are related to physical and mental health. Social support is an important source to aid coping, but this is not without its difficulties. This study was conducted to investigate the relationship between religious coping and self-care in a sample of Iranian cancer patients. In this cross-sectional study (October–December, 2015), 380 cancer patients were entered into the study using non random sampling (accessible sampling). Data were collected using socio-demographic, religious coping (R-COPE), and self-care questionnaires. Male patients (48.39 ± 13.39; 95% CI 46.41–50.38) were older than the females patients (45.33 ± 18.44; 95% CI 42.79–47.87). The findings indicated that there was a significant correlation between self-care and positive religious coping ($r = .188$, $p = .009$). Also there was a significant relationship between self-care and a history of smoking ($p < .05$). It seems that improving the level of positive religious affiliation can have beneficial effect on the self-care of cancer patients. Therefore, it is necessary to conduct these studies with greater scale and more different societies to achieve more reliable results about the effects of religious coping on self-care behaviors in cancer patients.

Keywords Self-care · Cancer · Religious coping · Iran · Cancer patients

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Introduction

According to a World Health Organization's report, the number of deaths caused by cancer in the United States of America (USA) has been estimated to increase to more than 800 thousand people, and it is expected that this trend will continue in an upward trajectory (Goldman and Bennet 2000; Goudarzian et al. 2017). In Iran, based on the first national cancer' reports, the number of new cancer cases in Iran was 55,855 in 2005 (Mousavi et al. 2009). Cancer is the third common cause of death after cardiovascular disease and accidents in Iran and leads to 50,000 annual deaths (Mansour-Ghanaei et al. 2012).

In cancer patients, self-care means an increased quality of life, managing symptoms, and increasing satisfaction with life (Johnston et al. 2009). The National Comprehensive Cancer Network (NCCN), according to the instructions of 2016, has presented recommendations for patients to be actively involved in their treatment. This includes educating patients and families about self-care, fatigue management strategies, pharmacological, and finally non-pharmacological interventions (O'Regan and Hegarty 2017).

Previous research has stated that religion is one of the factors affecting self-care (Rahnama et al. 2015). Therefore, it seems to follow that there is evidence that religious and spiritual practices may be related to physical and mental health (Heidari et al. 2013). Psychologists now suggest that it is not enough just to use commonly used approaches, such as cognitive behavioral therapy, to treat and cope with different physical illnesses (Kiani and Hesabi 2017). The use of incentives and religious beliefs is a non-conventional way for this issue (Koenig 2007). Religious coping deals with external and internal stress and pressure with the help of religious measures (Fard and Bagheri Nesami 2012). This issue is very important in cancer patients due to the risk of developing stress due to various pressures which occur due to having an illness of this type (Esmaeili et al. 2015; Hynes 1996; Phelps et al. 2009). These guidelines are an intrinsic process applied by a person in the face of problems (Esmaeili et al. 2015). Religious coping is one of the most important types of coping strategies, which included concepts such as trust in God (Billings and Moos 1984; Esmaeili et al. 2015) as a method for dealing with life changing illnesses such as cancer. Positive religious coping is the style of dealing with negative life events with the help of God. However, in the negative religious coping, avoidant and insecure individual relationship with God is measured (Bagheri Nesami et al. et al. 2017; Kenneth and Hahn 1986). According to the existing theories, the researchers concluded that religious coping behavior can make the patients more comfortable in order to cope with the illness (Bagheri Nesami et al. 2010; Hebert et al. 2009; Ramirez et al. 2012).

Background

Research findings seemed to indicate that religious coping creates a positive view in patients with chronic diseases and, furthermore, the creation of motivation and power will result in increasing the self-care behaviors in the individual (Koenig 2004). In fact, religious coping can maintain self-esteem as well as psychological relief and there is hope that these factors will cause an increase in the accuracy of self-care (Bagheri Nesami 2014; Büssing et al. 2008; Büssing et al. 2009; Hebert et al. 2009). The framework for this research is influenced mainly by the existing theoretical models in organizational psychology and nursing research. In the study of Jafari et al. (2015) which was conducted on patients with type 2 diabetes, a significant relationship was found between religious

orientation and self-care. Sharif Nia et al. (2017) also demonstrated an independent significant association between positive religious coping and self-care behaviors in patients with chronic illness.

But in a qualitative study by Ahmadi and Anoosheh (2011) (quality of life and religious coping in diabetic patients), it was stated that there was found to be no relationship between these two variables. For the past decades, researchers have been seeking to identify the characteristics, functions, expressions, or manifestations of practicing religion or being religious, that exert health-related effects. Several researchers have proposed that particular types or modes of religious expression or identification may be associated with certain respective bio-behavioral or psychosocial constructs that, independently of religion, are known or believed to be related to health (Ellison and Levin 1998). According to Lazarus and Launier (1978), coping refers to "efforts, both action-oriented and intra psychic, to manage (that is, master, tolerate, reduce, minimize) environmental and internal demands and conflicts among them, which tax or exceed a person's resources." Although researchers interested in coping have overlooked the role of religion over many years, there is mounting evidence that religious cognitions and behaviors can offer effective resources for dealing with stressful events and conditions (Prati and Pietrantoni 2009). Coping with stress, in turn, has been shown to be a powerful factor in both preventing disease and hastening recovery from illness. Religious coping is especially popular and apparently effective for certain social groups (e.g., African Americans, elders, and women) (Goeke-Morey et al. 2014). In addition, religious cognitions and behaviors, especially those centering on prayer, meditation, and other devotional pursuits, seem to be especially valuable in dealing with serious health problems (both acute and chronic) and bereavement.(Idler 1995; Mattlin et al. 1990; Prati and Pietrantoni 2009) Health crises and bereavement are events and conditions that (1) may lack clear or satisfying worldly explanations, (2) may constitute "boundary experiences" in that they challenge fundamental premises of existence (or, indeed, threaten existence itself), (3) may undermine common sense notions that the world is just and that people "get what they deserve" (e.g., premature or violent deaths, unexpected accidents), and (4) may require emotion management instead of pragmatic problem-solving efforts (Levin 1993; Prati and Pietrantoni 2009).

Necessity of the Current Study

According to the literature available, it seems that no study has been undertaken on the relationship of self-care behaviors with religious coping in cancer patients. Also, based on the literature, there were a number of conflicts among the past studies thus indicating the need to design future studies which help to demystify the aspects of this topic.

Objective

Despite the high prevalence of cancer in Iran, this study was undertaken to determine the relationship between self-care and religious coping in cancer patients. Generally, based on the literature reviewed earlier and for the purpose of this study, the following hypotheses were developed:

H1 There is a relationship between religious coping and self-care in cancer patients.

H2 Demographic variables are associated with self-care in cancer patients.

Materials and Methods

Study Design

In this cross-sectional study (October–December, 2015), 380 cancer patients that were admitted to one of the associated university's medical sciences hospitals (Sari, Iran) were entered to the study using non random sampling (accessible sampling). The adequacy of the sample size was calculated to be 380 based on two-sided significant degree, $\alpha = .05$ and test power of 80 ($d = .3$) using G*power 3.0.10 software. In this interval of 4 months, about 600 patients were admitted to the oncology ward of these hospitals. In order for a participant to be included in this study, he/she was required to meet the following criteria: (1) diagnosis of cancer, (2) age 18 years or older, (3) do not taking antidepressants in the last 6 months, (4) able to read and write Farsi, (5) bound to the religion of Islam, (6) and alert, oriented, and cognitively intact. Patients who were excluded from the study included those: (1) who transferred to another hospital; (2) with critical co-occurring conditions such as drug or alcohol addiction; and (3) with language and/or physical problems that impeded their ability to perform the study requirements. Out of the represented patients ($n = 600$), 150 patients were excluded (under than 18 years old [$n = 52$], taking antidepressant drug during last 6 month [$n = 71$] and acute medical conditions [$n = 27$]. Of the remaining 450 eligible participants, 380 agreed to participate with the response rate of 63.3%.

The purpose of the study and guides for completing the questionnaires were described to participants. Also, an informed consent form was signed by the patients. The necessary explanation regarding the objectives of the study was given to patients, and the questionnaires were distributed.

Data Collection Tools

Data were collected using a demographic questionnaire, self-care and Pargament religious coping (R-COPE). The demographic questionnaire included items such as age, sex, education level, economic status, family history of cancer, and stage of the cancer.

Self-Care Questionnaire

Self-care questionnaire that was published by the Iran Ministry of Health, contained four items including physical, psychological care, emotional, and spiritual self-care which, overall has 34 items (Ministry of Health and Medical Education 2011). The scoring method utilized a Likert scale from 1 to 5 (do not have a program, never, rarely, sometimes or always) (Bagheri Nesami et al. 2016). Total score ranged from 34 to 170 and was categorized as 34–67 (poor), 68–101 (average), 102–135 (good), and 136–170 (excellent) levels of self-care. Bagheri Nesami et al. (2015) calculated the reliability to be .83 by evaluating the tool in elderly patients. Also in another study, the reliability of this instrument was calculated to be 0.841 by class correlation coefficient (Bagheri Nesami et al. 2016). In present study, the reliability of this tool in cancer patients was calculated to be .792 using Cronbach's alpha.

Religious Coping Questionnaire (R-COPE)

Religious coping methods were investigated using *R-COPE*. This standard questionnaire had 14 items to measure positive and negative religious coping, and it was made by Kenneth Pargament (Pargament et al. 1998). Each positive and negative scale included seven options of religious coping test. The scoring method utilizes a Likert scale, from "not at all" to "many times." Positive religious coping is a style of dealing with negative life events in which a person using the evaluation and positive changes associated with God deals with those events. A person believes that God will not abandon them, when confronting sad events. But the other form of coping which is called "negative coping" is when a person establishes an avoidant and insecure relationship with God. For example, one believes that God will leave them alone in difficult moments (Ramirez et al. 2012). In the study of Esmaeili et al. (2015) which was conducted using a participant sample of university students, an acceptable reliability for this tool was reported (Cronbach's alpha = .82).

Statistical Analysis

The statistical package for social sciences, version 20.0 (SPSS Inc., Chicago, IL, USA), was used for the data analysis. First, descriptive statistics for continuous variables were shown as means and standard deviation (SD) and *n* (%) for the categorical variables. Spearman's correlations were used to probe the relationship between self-care and religious coping. Finally, the predictors associated with self-care were determined using generalized linear models (GLM). Statistical significance was set at $p < .05$.

Results

Preliminary Analyses and Descriptive Information

Demographic characteristics of 380 cancer patients are shown in Table 1. Males (48.39 ± 13.39; 95% CI 46.41–50.38) are older than females (45.33 ± 18.44; 95% CI 42.79–47.87). The mean total score of self-care, negative, and positive religious coping was (131.72 ± 12.45; 95% CI 130.47–132.98), (18.22 ± 3.25; 95% CI 18.12–18.74), and (18.43 ± 3.11; 95% CI 17.89–18.55), respectively.

Relationship Between self-Care and Religious Coping (Positive and Negative)

The results of Spearman's correlation analysis (Table 2) showed that there was a positive and significant correlation between self-care and positive religious coping ($r = .188$, $p = .009$) and negative correlation with negative religious coping ($r = -.199$, $p = .009$). According to the results of generalized linear regression models in Table 3, there was no significant relationship between self-care and religious coping in cancer patients ($p > .05$).

Relationship Between self-Care and Demographic Profile of Cancer Patients

In addition, there is a significant relationship between self-care and economic situation ($p < .05$), age ($B = -.16$; $p = .008$), marital status ($B = 13.562$; $p = .0001$), history of

Table 1 Sample characteristics of cancer patients included in the study

Characteristic	*N* (%)
Sex	
Male	175 (46.1)
Female	205 (53.9)
Economic status	
Weak	110 (28.9)
Average	204 (53.7)
Good	66 (17.4)
Education	
Illiterate	210 (55.3)
Diploma	138 (36.3)
BS	22 (5.8)
MSs and above	10 (2.6)
Marital status	
Single	51 (13.4)
Married	329 (86.6)
Cancer stage	
One	132 (34.7)
Two	133 (35)
Tree	92 (24.2)
Four	23 (6.1)
Family history of cancer	
Yes	112 (29.5)
No	268 (70.5)
Depression	
Down	261 (68.7)
Up	119 (31.3)
Past medical history[c]	
Cardiac diseases	146 (38.42)
Respiratory diseases	57 (15)
Gastric diseases	141 (37.1)
Urinary diseases	36 (9.48)
History of cigarette smoking	
Yes	71 (18.7)
No	309 (81.3)
Characteristic	Mean (SD)
Age	46.74 (16.328)
PRC[a]	18.43 (3.11)
NRC[b]	18.22 (3.25)
Self-care	131.72 (12.45)

[a]Positive religious coping

[b]Negative religious coping

[c]Number of patients who had these diseases

Table 2 Relationship between self-care and religious coping

Variable	Self-care	
	r	*p*
PRC[a]	.188	.009*
NRC[b]	−.199	.009*

*$p < 0.005$

[a]Positive religious coping

[b]Negative religious coping

Table 3 Predictors of self-care in cancer patients

Variable	*B*	SE	95% CI		*p*
Education					
Illiterate	− 5.246	3.7516	− 12.599	2.107	.162
Diploma	− 5.818	3.5709	− 12.817	1.181	.103
BS	− 20.578	3.9376	− 28.296	− 12.861	.0001[b]
MSc and upper	0[a]	.	.	.	.
Economic status					
Weak	− 5.862	1.8100	− 9.409	− 2.314	.001[b]
Average	3.853	1.7594	.404	7.301	.029[b]
Good	0[a]	.	.	.	.
Cancer stage					
One	− 3.156	3.2147	− 9.457	3.145	.326
Two	− 3.969	2.7284	− 9.317	1.379	.146
Three	− 4.179	2.9541	− 9.969	1.611	.157
Four	0[a]	.	.	.	.
Past medical history					
Cardiac diseases	− .861	.42	− 2.106	.23	.086
Respiratory diseases	− .913	.513	− 1.961	.142	.091
Gastric diseases	− .983	.597	− 2.613	.18	.096
Urinary diseases	0[a]	.	.	.	.
Age	− .160	.0604	− .278	− .042	.008[b]
Sex	− 2.220	1.4909	− 5.142	.702	.137
Marital status	13.562	2.0982	9.450	17.675	.0001[b]
History of cigarette smoking	− 6.608	1.7115	− 9.962	− 3.253	.0001[b]
Family history of cancer	− 3.099	1.3896	− 5.823	− .375	.026[b]
PRC[c]	.463	.2704	− .067	.993	.087
NRC[d]	.212	.2145	− .208	.633	.322

[a]Set to zero because this parameter is redundant

[b]Statistically significant at $p \leq .05$

[c]Positive religious coping

[d]Negative religious coping

cigarette smoking ($B = -6.608$; $p = .0001$), and family history of cancer ($B = -3.099$; $p = .026$) in cancer patients.

Discussion

This study was conducted to determine the relationship between religious coping and self-care in cancer patients. Findings of the study showed that positive religious coping was higher in the patients as compared to negative religious coping. This finding was supported by previous research studies Ursaru et al. (2014), Khodaveirdyzadeh et al. (2016). On the other hand, Nelson et al. (2002), McCoubrie and Davies (2006) and Khezri et al. (2015) stated that negative religious coping in the cancer patients has been higher than the positive religious coping. The possible reasons for these differences could be the sample size and religious and cultural differences of the participants in the study.

One the most important results of this study is the positive and significant relationship between positive religious coping and self-care in the patients. Jafari et al. (2015) in a study on diabetic patients stated that religious belief increased the amount of self-care in diabetic patients. Also, Sharif Nia et al. (2017) in another study pointed out the relationship between religious coping and self-care among Iranian students. In line with these studies, Heidari et al. (2017) in another study found that there was a relationship between religious practices and self-care in patients with type 2 diabetes. In fact, it can be stated that religion and spirituality affect the assessment of the situation in people by strengthening their compliance with various diseases in acute and chronic conditions (Giovagnoli et al. 2006; Taheri-Kharameh et al. 2017). On the other hand, the feeling of belonging to a source of the sublime, hope in God's help, and benefiting from moral support in stressful life situations are all the methods which can reduce the risk of vulnerabilities in religious people (Abdoli et al. 2011; Shakibazadeh et al. 2011). With this interpretation, it can be stated that religious beliefs create incentive for the sound control of daily activities and increase the resources of inner strength and life expectancy (Askari and Nikmanesh 2014) which is followed by more self-care behaviors reflected in people. A more interesting and robust association was found between physical health status with religious television and radio (RTV) and religious coping, although not in the same direction as other religious measures. Those who engage more frequently in that activity had significantly more comorbid medical illnesses and tend to report poorer physical functioning, an association which was found primarily in younger patients (aged 50–64). The frequency of religious coping has also been correlated with higher blood pressure (Koenig et al. 1998), worse overall health and more depressive symptoms (Koenig et al. 1997) in studies of the community-dwelling elderly and with more generalized anxiety in younger populations (Koenig et al. 1993). It is difficult to imagine why frequent RTV would cause a worsening of physical health status, except by fostering physical inactivity, but it could be that poorer physical functioning and more comorbid medical illness made it difficult for such patients to attend religious meetings and this was compensated by turning to RTV.

Furthermore, the results of the present study showed that variables such as age, socioeconomic status, marital status, family history of cancer, and a history of smoking are good predictors to determine the self-care behaviors in patients. In another study, the two variables of age and sex were good predictors in order to determine self-care behaviors of cancer patients, while in the present study the variable "gender" was not a significant and good predictor when determining the amount of self-care of participants in the study

(Albright et al. 2001). The aforementioned study was conducted on patients with type II diabetes. The probable cause of this inconsistency can be the type of participants' disease and self-care instrument used to measure the amount.

Limitations of the Study

Differences in cultural situations (was not controllable in the study) and lack of accuracy when completing the questionnaire (because of the difficult situation related to the treatment procedures) were the most important limitation of this study. Also, relationships with physical health were less frequent than psychosocial factors. This was partly expected, because religious beliefs and practices are often used to help cope with medical illnesses and as the severity of illness increases, religious activities, especially private ones, likewise increase (Koenig et al. 2004). Thus, even if religious factors helped to prevent disability and limit the severity of medical illness, this would be difficult to demonstrate in a cross-sectional study, in which sick patients turning to religion could neutralize such effects (Koenig et al. 2004).

Recommendations for Future Research

It is recommended that more detailed studies should be conducted to demonstrate replicability with different samples. For example, future similar studies with samples from different disease groups and also longitudinal and RCT designs are suggested to verify the findings of this study. Furthermore, since there is an Iranian diaspora across the world who may have a percentage with cancer, performing this study in Iran, Europe, Asia, and USA would be beneficial so as to determine its generalizability to all Iranian populations.

Application of the Results

This research provides information about Iranian cancer patients that may help to inform the development of strategies to promote better disease adaptation and self-management. It also fills a gap in cancer literature by reporting quantitative data on coping styles, relative to self-care behaviors. Since cancer patients are affected with a variety of complications during their life, which can undermine their quality of life and with the fact that self-care improves the level of health in these patients, it is necessary to improve the level of self-care in this particular group. According the present results, it seems that relying on religious issues and religious coping methods (especially that of positive religious coping) and having a sense of satisfaction and pleasure about the actual events can significantly help in improving the level of self-care in patients. Therefore, it is recommended that attention be given to the issues of religious coping along with other aspects of supportive care provided at health centers and other health outlets.

Conclusions

Considering the results of the present study, a significant correlation was found between positive religious coping and self-care behaviors. Also, self-care had a significant relationship with age, economic status, marital status, and history of cigarette smoking. However, it is necessary to conduct these studies on a greater scale such as sample size and

population types so that results can be disseminated with more commensurate levels of confidence in the results obtained.

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