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CORRELATION BETWEEN RELIGIOUS COPING AND DEPRESSION IN CANCER PATIENTS

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SUMMARY

Background: *Cancer often progresses very rapidly and either leads to various complications or patients eventually die of the disease. One of important consequences of cancer is depression which can increase the morbidity and mortality in non-treated cases. Religious coping is the use of religious beliefs or practices to reduce distress and deal with problems in life. This study aimed to determine the relationship between religious coping and depression in cancer patients.*

Subjects and methods: *A descriptive-correlational study was conducted on 150 consequent cancer patients in three centers: Imam-Reza Hospital in Birjand, Qaem and Omid hospitals in Mashhad. Two questionnaires including Pargament's questionnaire for evaluation of religious coping and the Beck depression inventory were used. Data analysis was performed using multiple regression and correlation.*

Results: *There was no significant difference between men and women in the mean score of avoidant relationship with God and alternate fearfulness and hopefulness (ambivalence coping style). But the mean score of relationship with God in women was higher than men. The rate of depression was higher among patients who had an avoidant strategy. The religious coping method of relationship with God was effective in reducing depression. The rate of depression was lower among patients whose families had a better attitude to religion.*

Conclusions: *Psychotherapy, individual/familial counseling, and especially increasing of religious beliefs such as praying and trust in God, as well as increasing the knowledge of patient and his/her family cause better acceptance of the disease and better confrontation of psychological problems.*

Key words: *religious coping – depression - cancer*

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INTRODUCTION

Cancer is a common disease which is often diagnosed late in advanced stages and leads to several complications and even death. Depression is also one of the important consequences of cancer. Untreated depression can result in physical disability and sometimes resistance to treatment as well as having an effect on mental and physical performance of all the family or even lead to death (Lebowitz et al. 1997). Studies have indicated that depression is one of the most common psychiatric disorders among cancer patients (Brintzenhofe-Szoc et al. 2009, Burgess et al. 2005, Bussing et al. 2008, Saevarsdottir et al. 2010, So et al. 2009, Wasteson et al. 2009). A better understanding of factors related to depression and its reduction would help us to decrease and prevent the consequence disabilities of these patients and improve the quality of life and even their survival. Religious coping is one of these factors and has been considered in recent years.

Coping is a dynamic, continuous, progressive and life-preserving process for adjusting to continual changes. Coping strategies enable an individual to maintain health and avoid mental disorders and its appropriate application leads to correct assessment of situations, to a feeling of safety, to have access to support, to grow and to achieve identity (Carson & Arnold 1996). Religious coping is the use of religious beliefs or practices to reduce distress and deal with problems in life (Koenig et al. 1997).

So far, several studies in different countries have investigated the relationship between religions and mental health issues (depression, anxiety and etc.) with controversial results.

Some writers, such as Freud and Ellis have argued that religion is negatively related to mental health. However, others such as James, Jung, Allport, Maslow, Adler, and Fromm have argued for a positive relationship (Lawrence & Gary 1999).

Review of empirical studies indicates inconsistency of results regarding the relationship between religion and mental health. Ellis stated that religion is associated with non-rational thinking and emotional disorders (Ellis 1980), while Bergin rejected the association of religion with psychopathology (Bergin 1983). Other studies indicate that applying coping methods and spiritual and religious issues are very important to cancer patients for coping with their disease so that these methods should be considered as important issues in the treatment of depression among these patients (Abernethy et a. 2002, Fenix et al. 2006, Norum et al. 2000, Zwingmann et al. 2006). Koenig et al also cite the evidence that physicians and mental health specialists observe a positive relationship between religion and mental/physical health (Koenig et al. 1997). Park et al. (1990) studied protestant religious groups and showed

that, whenever the level of intrinsic religious orientation is higher, persons are less likely to develop depression.

Koenig et al. (1997) found that the level of depression among subjects who attended religious activities was much lower than in those who did not. Also, Parker and colleagues have reported that there was less depression among subjects who had higher religious orientation (Parker et al. 2003). Smith and colleagues showed a significant negative correlation between depression and religious orientation (Smith et al. 2003).

In this regard, our study aimed to identify the relationship of religious coping strategies with depression in cancer patients

SUBJECTS AND METHODS

This descriptive-correlational study was conducted on 150 consequent cancer patients in three centers in Iran: Qaem and Omid hospitals in the city of Mashhad and Imam-Reza Hospital in the city of Birjand. All patients with a confirmed diagnosis of cancer were included. Patients with a family history of psychological disorders such as schizophrenia and mood disorders were not included in the study. The research objectives were explained to the participants and informed consent was obtained prior to administering the questionnaire. This project was approved by the Ethics Committee of Birjand University of Medical Sciences.

Two questionnaires including Pargament's questionnaire for evaluation of religious coping and the Beck depression inventory (BDI) were used.

The Religious Coping Questionnaire (RCOPE) included 20 items on a 5-point Likert scale rating which evaluated religious belief and practice including relationship with God, avoidant relationship with God, and an alternately fearful and hopeful relationship (ambivalence coping style). The final score for each category was obtained by summing the score of related items. Cronbach's alpha for test reliability estimates were calculated by Pargament in 2000 (Pargament 2000) and it was 0.98.

The 21-item BDI questionnaire was administered to the subjects. It was initiated in 1961 and revised in 1974 with a 4-point Likert scale rating (0 to 4) and the total scores can range from 0 to 63. The standard cut-offs for severity of the BDI questionnaire were as follows: 0–13 no depression, 14–19 mild depression, 20–28 moderate depression, and 29–63 severe depression (Beck 1996). The questionnaire is self-reporting and reflects different symptoms of depression such as sadness, hopelessness, self-blame, guilt, fatigue, and loss of appetite. The time required to complete the BDI was approximately 10 min and patients with at least a 6-years primary school educational level were eligible to fill the questionnaire.

Statistical analysis

Descriptive statistics include frequency distribution tables and mean ± standard deviation (SD), which were generated with the SPSS (version 15) statistical software. Data analysis was performed using multiple regression and correlation and values of p equal or less than 0.05 were considered statistically significant.

RESULTS

This study was carried out on 150 cancer patients. The demographic profile of study subjects is shown in Table 1. The majority of our cases were female (59.3%), married (84%), illiterate (44.7%) and at age 41 to 50 years (23.3%). A positive family history of cancer was observed in 30 cases (20%). The mean age among women was 45.87±14.77 (range, 11-80) years and it was 49.03±19.75 (range, 10-83) years among men. There was no significant difference between men and women in this regard.

Table 1. Demographic profile of study subjects

Variable	Number (%)
Gender	
Male	61 (40.7%)
Female	89 (59.3%)
Age category	
10-20	13 (8.7%)
21-30	15 (10%)
31-40	24 (16%)
41-50	35 (23.3%)
51-60	31 (20.7%)
61-70	20 (13.3%)
71-83	12 (8%)
Marital status	
Single	24 (16%)
Married	126 (84%)
Level of education	
Illiterate	67 (44.7%)
Less than high-school diploma	43 (28.7%)
High-school diploma and more	40 (26.7%)
Family history of cancer	
(-)	120 (80%)
(+)	30 (20%)

The mean depression score was respectively 5.8±4.08 and 5.58±4.63 in men and women with no significant differences between the sexes. The mean score of relationship with God was significantly higher in women than men (32.53±3.46 vs. 30.96±3.53, respectively) ($p<0.01$). However, the mean scores for avoidance and ambivalence coping strategies were similar in the two sexes. (Table 2)

There was a positive correlation between duration of disease and score of depression ($r=0.16$), but this was not significant at the level of 0.05 ($p=0.06$). A significant negative correlation was observed between avoidance relationship with God and level of depression ($p=0.03$). However, there was no correlation between depression and other variables (age, relationship with God, and ambivalence coping style) (Table 3).

Table 2. Comparison of mean depression score and religious coping strategies between women and men

Variable	Men	Women	p value
Depression	5.8±4.08	5.58±4.63	0.770
Religious coping strategies			
Relationship with God	30.96±3.53	32.53±3.46	0.008
Avoidant relationship	12.72±2.23	12.71±2.46	0.970
Ambivalence relationship	21.02±2.1	20.95±2.15	0.860

Table 3. Correlation between depression and other variables

Variable	r	p
Age	0.050	0.51
Duration of disease	0.160	0.06
Religious coping strategies		
Relationships with God	0.053	0.52
Avoidant relationship	-0.180	0.03
Ambivalence relationship	-0.004	0.96

Table 4. Correlation between depression and religious coping strategies (after controlling for the variables of age and disease duration)

Religious coping strategies	r	p
Relationships with God	0.090	0.31
Avoidant relationship	-0.177	0.04
Ambivalence relationship	-0.030	0.70

Table 5. Comparison of mean scores of depression and religious coping strategies between different levels of education

Variable	Level of Education			
	Illiterate	Less than diploma	Diploma and more	p value
Depression	6.69±5	5.18±3.41	4.5±3.97	0.030
Religious coping strategies				
Relationship with God	31.54±3.14	32.02±3.65	32.35±3.56	0.500
Avoidant relationship	12.25±2.5	13.16±2.1	13±2.31	0.100
Ambivalence relationship	21.66±1.83	19.93±2.4	20.97±1.8	0.001

The variable of avoidance relationship with God remained significantly correlated with depression ($p=0.04$) even after controlling for the other variables (age and duration of disease). (Table 4)

As shown in table 5, the level of depression was reduced in patients with higher education. The mean depression score was 6.69±5 in illiterate patients, while it was 4.5±3.97 in those who had a high-school diploma or more ($p=0.03$). Tukey's post hoc test showed that this difference was related to illiterate cases versus patients who had a high-school diploma or more, however, there was no significant difference between other levels of education in depression score.

Also, the score of ambivalence coping style was significantly different by the level of education. Tukey's post hoc test showed that this difference was between illiterate vs. high-school diploma ($p<0.001$) and also between less than high-school diploma vs. higher education levels ($p<0.05$), although there was no difference between illiterate and high-school diploma/higher levels of education. There was no association between level of education and avoidance relationship with God.

Finally, a stepwise multiple regression analysis was performed for independent variables, including duration of disease, age and religious coping methods (relationship with God, avoidance and ambivalence coping strategies). In this model depression was considered as a dependent variable. The avoidance coping was the first variable selected for entry into the regression and duration of disease was entered in the next step. Other variables (relationship with God and ambivalence coping style) were excluded from the equation. On the other hand the two variables of avoidance coping and duration of disease can be considered as predictors of depression in these patients ($p<0.05$).

The mean score of depression and religious coping methods were not different in patients with and without a family history of cancer.

DISCUSSION

The results of our study showed that the mean depression score as well as the scores for avoidance and ambivalence coping strategies were not different in men and women. However, the score of relationship with God was significantly higher in women. This difference can be related to the role of women as mothers in training children, because religion contains instructions and commands with ethical and training aspects. Also, dissimilarity between boys and girls in socialization patterns can influence this difference: so that in most cultures boys are trained to be independent and even to have aggressive behavior, but girls are trained to be submissive, to be a trainer, and be responsible.

Based on the findings of the present study, the level of depression can be predicted by the method of religious coping, so that it is higher among patients with

the avoidance coping method. These results were similar to the Abernethy, Fenix and Zwingmann studies (Abernethy et al. 2002, Fenix et al. 2006, Zwingmann et al. 2006).

Finally, the religious coping methods (relationship with God) had a high efficacy in reducing depression and this was consistent with the study previously reported by Olszewski and Norum (Norum et al. 2000).

The results of this study showed that among the predictor variables including age, gender, and education level and the religious coping components (relationship with God, avoidant relationship, ambivalence relationship), only avoidant relationship showed a significant negative correlation with depression.

The relationship between religious coping and depression has been examined in several studies (Abernethy et al. 2002, Koenig et al. 1992, Olson et al. 2012, Ramirez et al. 2012). In a study by Koenig and colleagues, after controlling for demographic and health-related variables, a significant negative relationship was observed between religious coping and depression (Koenig et al. 1992). In a study by Olson and colleagues, the use of positive religious coping was reported as a predictor of better mental health and conversely, negative religious coping as a disturbing factor for mental health. Their results are consistent with our findings (Olson et al. 2012).

Ramirez et al found that hemodialysis patients frequently adopted positive and negative religious coping to deal with renal disease. Also, there was a relationship between religious coping and either depression or anxiety. Although, there was no relationship between positive religious coping and psychological distress, religious coping was correlated with multidimensional aspects of quality of life (Ramirez et al. 2012).

Based on the present study, the mean depression score was significantly lower among individuals with high school diploma or higher level of education than those with no education. No similar study was found in a literature review, but one possible reason could be the use of more effective religious coping strategies among people with higher education levels.

One of the main reasons for these finding could be that the religious orientation increases one's capacity for self-control which can prevent the effectiveness of external influences, thus a subject may be less affected by external conditions and have a better mental health.

Overall, various theories and models have been expressed about the role of religion in mental and physical health and also about coping with stressors which explain the psychological constructs of religion and how it affects the mental health. These models are as follows:

Pargament and colleagues, along with the introduction of new ideas and coping mechanisms, have proposed a comprehensive theory on the role of religion in coping with stressors. They suggested three mechanisms for religion to deal with mental and environmental stressors: A) religion can be considered as a part of the coping process and may influence one's evaluation of the threatening factor and its severity; B) it may interfere with the coping process by re-definition of the problem as a solvable challenge; C) it can affect the outcomes of stressor factors. In other words, the interpretation of consequences or outcomes related to life events may be influenced by religious beliefs (Pargament et al. 1988, 1990).

Some believe that religious practice is effective in emotion regulation, behavioral inhibition, and self-control thus enabling the suppression of distressing thoughts and disorganized behaviors when it is applied as a framework for expressing emotions and as a defense against unpleasant feelings (Spilka et al. 2003).

Galanter (1982) stated that faith in God, praying and belief in providence leads to an increased tolerance to pain. It provides spiritual needs and increases the individual's ability to get away from his/her body and relieves the pain (Galanter 1982). The cooperation of wide range of human sciences is required for better understanding the interactions between cancer and depressive and other psychological states. However, recent studies demonstrated a strong relationship between religious involvement and mental health (Aukst-Margetić 2002).

CONCLUSION

In conclusion, the present data suggest that religious beliefs can direct an individual toward having good mental health and that faith in God can provide strength which a person can use to fight the depression. Psychotherapy, individual/familial counseling, increasing the knowledge of patient and his/her family and especially increasing the religious belief through praying and trust in God, can cause better acceptance of the disease and better confrontation with psychological problems.

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