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ORIGINAL PAPER

Depression and Religious Coping in Patients with Acute Coronary Syndrome in Turkey

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Abstract

Psychological health problems such as depression, anxiety and feelings of distress are often seen in patients with acute coronary syndrome (ACS). Religious coping in dealing with psychological health problems is one of the methods commonly used by cardiac patients. This study was conducted to determine the depression levels and religious coping methods of individuals diagnosed with ACS and identify the relationship between their positive or negative religious coping methods and their depression levels. The descriptive and correlational study was conducted with 253 ACS patients. In the study, the depression levels of most patients were low, but 19.8% showed moderate-severe depressive symptoms. It was found that the patients adopted positive religious coping styles on a high level, but there was no significant relationship between positive religious coping and depression levels ($p > 0.05$). It is recommended that health professionals also closely monitor ACS patients for depressive symptoms after their diagnosis, encouraging patients to use positive religious coping styles to support their well-being and recovery against this life-threatening disease.

Keywords Acute coronary syndrome · Depression · Religious coping

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Introduction

Acute coronary syndrome (ACS) is a term used to describe symptoms compatible with acute myocardial ischemia, which includes myocardial infarction and unstable angina (Usta et al., 2015). Despite the developments in diagnosis and treatment in recent years, ACS remains the most significant cause of morbidity and mortality in Turkey, as in many other countries (Ozen et al., 2012). The most important feature of ACS is that it can be life-threatening because the risk of sudden death and myocardial necrosis in ACS is quite high (Dehghanrad et al., 2020; Simsek & Alpar, 2020).

Psychological health problems such as depression, anxiety and feelings of distress are often seen in ACS patients (ESC, 2014; Mangolian Shahrbabaki et al., 2017; Yildirim & Ozturk, 2016; Sunbul et al., 2013). The presence of depression in combination with ACS negatively affects the cardiac rehabilitation process, and therefore, it worsens the prognosis, reduces the quality of life and can lead to an increase in the frequency of recurrent acute coronary events and mortality (Yagli et al., 2015; ESC, 2014; Yildirim & Ozturk, 2016; Sunbul et al., 2013; Ozer & Demir, 2012; Bekelman et al., 2007). Thus, in these patients, it is very important to develop methods of dealing with psychological health problems in addition to disease management.

Currently, one of the approaches being considered in dealing with psychological health problems such as depression and anxiety is religious coping. Religious coping behaviors are used by the individual to reduce or eliminate psychological conflicts arising from stress and anxiety, and they are a method where the individual tries to relax and find peace by using religious thoughts, emotions and behaviors within their religious system/belief in cases that they fail to control or overcome (Altintas, 2015). Religion may protect the individual psychologically by keeping emotions such as patience, sacrifice and struggle strong as a motivating force that alleviates the pain and suffering of life and nourishes the life force (Cengil, 2003). In this respect, religious coping may help people withstand difficulties, prevent anxiety and reduce anxiety and depression symptoms (Dehghanrad et al., 2020; Hughes et al., 2004). Moreover, individuals adopt two different styles of religious coping: positive and negative. Positive religious coping includes activities such as "turning to God, doing good, religious pleading, religious rapprochement, seeking religious direction and religious transformation." Negative religious coping, on the other hand, includes activities such as "spiritual discontent, interpretation of evil, and interpersonal religious discontent" (Altintas, 2015). Such that, positive religious coping, which is defined as a safe and cooperative relationship with a divine being, strengthens the person's state of well-being. Despite this, negative religious coping, represented by underlying spiritual tensions, is a predictor of distress (Eways, 2016). In general, individuals experience positive emotions (e.g., health, optimism, meaning, purpose) more and negative emotions (e.g., depression, anxiety, low self-esteem, hopelessness) less with religiousness/religious coping (Lucchese & Koenig, 2013).

In individuals with cardiovascular diseases, positive religious coping helps patients trust their strengths, accept new conditions and cope by finding their

inner selves (Mangolian Shahrbabaki et al., 2017). Studies have stated that positive religious coping ensures strength and provides comfort to individuals in the acute phases of the disease (Trevino & McConnell, 2014), and it is associated with lower levels of depression (Bekelman et al., 2007; Blumenthal, et al., 2007; Contrada et al., 2004; Cummings & Pargament, 2010; Whelan-Gales et al., 2009) and higher levels of psychological well-being in individuals with heart disease (Trevino & McConnell, 2014; Park et al., 2014; Bekelman et al., 2007; Assari et al., 2014). Furthermore, in systematic reviews examining religion and spirituality in people with cardiovascular diseases, it has been stated that religion/spirituality has an inverse relationship with disease development, and religiosity/positive religious coping has an improvement effect against morbidity and mortality in these patients (Lucchese & Koenig, 2013; Park et al., 2017).

Religious coping is an important issue that needs to be addressed by health professionals, as it contributes positively to desired health outcomes today (Cummings & Pargament, 2010; Mangolian Shahrbabaki et al., 2017). However, in the literature, studies examining the relationship between religious coping styles and depression levels in ACS patients are limited. It is believed that this study will contribute to the literature by revealing the religious coping methods and depression levels of ACS patients, determining the relationship between their religious coping methods and depression levels, and providing resources related to religious coping methods.

Methods

Aim and Design

This descriptive and correlational study was conducted to determine the depression levels and religious coping methods of ACS patients and identify the relationship between their positive or negative religious coping methods and their depression levels.

Population and Sample

The population of the study included patients who were receiving treatment with the diagnosis of ACS who presented to the cardiovascular surgery outpatient clinics of a public hospital for follow-ups between September and December 2021. The minimum required sample size of the study was determined using the formula for an unknown population, ($n = t^2pq/d^2$). The minimum required sample size was calculated as 246. In this context, 253 patients who had been receiving treatment for ACS for at least three months, were 18 years of age or older, at least literate in terms of education, had no verbal communication difficulties, not diagnosed with depression previously and agreed to participate in the study were included.

Data Collection Tools

The data were obtained by using the sociodemographic and clinical characteristics form, the Religious Coping Scale and the Beck Depression Inventory.

Sociodemographic and Clinical Characteristics Form: The form that was developed by the researchers included 16 questions about the sociodemographic and disease-related characteristics of the patients.

Religious Coping Scale: Regarding approaches to religious coping behaviors when facing a problem in one's life, this scale was developed by Raiya et al. (2008), and the Turkish adaptation study of the scale was carried out by Eksi and Sayin (2016). It is a 4-point Likert-type scale that consists of 10 items. There are two dimensions of the scale: positive religious coping and negative religious coping. Positive and negative religious coping scores are calculated separately on the scale. A total religious coping score is not obtained. The raw score that can be obtained from the positive religious coping subscale ranges from 7 to 28, and the raw score that can be obtained from the negative religious coping subscale ranges from 3 to 12. A higher score obtained in the positive religious coping subscale indicates more positive religious coping, while a higher score obtained in the negative religious coping subscale indicates more negative religious coping (Eksi & Sayin, 2016). In this study, the Cronbach's alpha internal consistency coefficients of the scale were determined as 0.92 for the positive religious coping dimension and 0.88 for the negative religious coping dimension.

Beck Depression Inventory (BDI): The scale, which was first developed by Beck et al. (1961), was adapted to Turkish by Hisli (1988). It is used to determine the severity of depressive symptoms in adults. Each item of BDI includes a statement with a 4-point Likert-type scoring system in the range of 0–3, with a total score range of 0–63 for all 21 items. Higher scores indicate higher levels of depressive symptom severity. The items in the scale are related to depressive mood, self-blame, body image, and feelings of guilt. The score of the respondent is interpreted as 0–9 points: Normal mental state; 10–18 points: Mild depression; 19–29 points: Moderate depression; 30–63 points: Severe depression (Hisli, 1988). In this study, the Cronbach's alpha internal consistency coefficient of the scale was determined as 0.83.

Implementation and Ethical Aspect

Prior to the study, approval was obtained from the ethics committee of a university, and the written permission was obtained from the institution where the study was conducted. Additionally, after receiving written and verbal consent from the patients who agreed to participate in the study, the data were collected by the researchers using the face-to-face interview technique. It was explained to the participants before the study that the data they would provide would only be used within the scope of the study and that their confidentiality would be ensured. For each participants, it took about 20–25 min for the data forms to be filled out by the researchers.

Data Analysis

The SPSS 22.0 program was used to analyze the data obtained in the study. The normality of the distribution of the data was evaluated by Kolmogorov–Smirnov test, and it was determined that the data were not normally distributed. The distributions of the sociodemographic and disease-related characteristics of the participants and their scale scores were analyzed using percentile and mean tests. Spearman's correlation analysis was used to examine the relationship between the patients' Religious Coping Methods Scale and Beck Depression Inventory scores. In the comparisons of the differences in the participants' scale scores based on some of their quantitative characteristics, Mann–Whitney U test was used to compare two groups, and Kruskal–Wallis test was used to compare more than two groups. Additionally, regression analysis was used to determine the explanatory effect of some variables on positive religious coping. The level of statistical significance was accepted as 0.05 in the interpretation of the results of the analyses.

Results

The mean age of the patients participating in the study was 59.87 ± 11.50 years, and their mean disease duration was 3.17 ± 2.15 years. Of the patients, 83% were male, about half (49.8%) were graduates of primary schools, 81.4% were married, and 69.2% were employed. While 43.1% of the patients stated that they were still smoking, 18.2% stated that they were alcohol consumers. It was determined that 56.9% of the patients had another chronic disease in addition to ACS, and the most frequently found diseases in the patients were hypertension (35.6%) and diabetes (25.7%). Approximately 94.1% of the patients stated that they could meet their daily needs alone, and 59.3% considered their general health status to be on a moderate level (Table 1).

The mean positive religious coping score of the patients (23.09 ± 5.82) was above average, and their mean negative religious coping score (8.10 ± 3.18) was average. According to the scores of the patients from the Beck Depression Inventory, it was determined that 17.4% had moderate depressive symptoms, and 2.4% had severe depressive symptoms (Table 2).

In the correlation of patients' mean Religious Coping Scale and Beck Depression Inventory scores; there was no statistically significant relationship between the positive and negative religious coping levels of the patients and their depression levels ($p > 0.05$).

Table 3 shows the results of the stepwise multiple regression analysis of the patients' positive religious coping levels in terms of different variables. In the multiple regression analysis, it was determined that the participants' gender, education level and ability to perform daily life activities were the factors that significantly influenced their positive religious coping levels ($R = 0.39$, $R^2 = 0.377$, $F = 23.385$, $p < 0.001$), and these factors explained 12% of the total variance in positive religious coping levels. In the stepwise multiple regression analysis, the variables of

Table 1 Sociodemographic and disease-related characteristics of the patients ($N=253$)

Characteristics	n	%
Age (year)		59.87 ± 11.50
< 65	169	66.8
≥ 65	84	33.2
Gender		
Female	43	17.0
Male	210	83.0
Education status		
Primary school	126	49.8
Middle School	36	14.2
High school and above	91	36.0
Marital Status		
Married	206	81.4
Single	48	18.6
Working status		
Yes	175	69.2
No	78	30.8
With whom does she/he live?		
Alone	42	16.6
With family	211	83.4
Smoking status		
Smoker	109	43.1
Never smoker	108	42.7
Quit smoking	36	14.2
Alcohol use status		
User	46	18.2
Never user	183	72.3
Quit user	24	9.5
Presence of other chronic disease		
Yes	144	56.9
No	109	43.1
Ability to perform activities of daily living		
She/He can do it alone	238	94.1
She/He can do with help	12	4.7
She/He cannot do	3	1.2
Regular exercise (20 min walk every day, etc.*)*		
Yes	74	29.2
No	179	70.8
Overall health assessment		
Good	76	30.0
Moderate	150	59.3
Bad	27	10.7

Table 2 Distribution of Patients' Religious Coping Scale and Beck Depression Inventory Mean Scores

Scales	X ± SS	*n*	%
Religious Coping Scale			
Positive religious coping	23.09 ± 5.82		
Negative religious coping	8.10 ± 3.18		
Beck Depression Scale	12.14 ± 7.79		
Normal		104	41.1
Mild		99	39.1
Moderate		44	17.4
Severe		6	2.4

Table 3 Regression analysis of some variables related to predicting positive religious coping

Variables	B	SE	*β*	*t*	*P* value
Age	0.032	0.033	0.064	0.990	0.323
Disease duration	0.180	0.643	0.057	0.321	0.698
Gender	− 3.030	0.971	− 0.196	− 3.120	0.002**
Education status	− 1.160	0.406	− 0.183	− 2.857	0.005**
With whom she/he lived	0.380	0.942	0.024	0.403	0.687
Presence of other chronic disease	0.202	0.743	0.017	0.272	0.786
Ability to perform activities of daily living	− 3.000	1.187	− 0.155	− 2.528	0.012*
Beck Depression Inventory	0.014	0.048	0.019	0.296	0.767
$R = 0.342$, $R^2 = 0.117$, $F = 4.624$, $p = 0.000$					

*$p < 0.05$; **$p < 0.01$

age, people with whom the individual lives, the presence of chronic diseases and the level of depression were variables that were not found to be significantly effective.

Discussion

Currently, ACS, a disease whose prevalence continues to increase day by day, causes some restrictions in the lifestyle of individuals after the disease. Restrictions and changes in an individual's life may lead to depression. This study aimed to determine the levels of depression and religious coping styles in individuals diagnosed with ACS and identify the existence of a relationship between these two variables.

Depression is a common chronic condition in ACS that negatively affects the results of treatment and rehabilitation and prolongs the duration of hospitalization (Contrada et al., 2004; Yagli et al., 2015). In this study, it was determined that the overall depression levels of the ACS patients were low. However, 19.8% of them experienced moderate/severe depression. In a similar study, it was found that 22% of patients had symptoms of mild to moderate depression (Yagli et al., 2015). Other studies have reported that the level of depression in coronary artery patients is high

(Abu et al., 2019; Park & Dornelas, 2012; Sunbul et al., 2013; Yagli et al., 2015). Although the depression levels of the ACS patients who were included in this study were generally low, the finding showed that about one-fifth of them were at risk. This suggests that depression screenings should be performed in ACS patients, and coping methods should be improved because the presence of depression makes disease management difficult.

Cardiovascular diseases including ACS are diseases that require the use of effective coping strategies to manage the disease itself and the difficulties associated with it. Religious coping is a strategy that is widely used by patients with such life-threatening diseases, while it includes religious and spiritual beliefs (Bekke-Hansen et al., 2014; Eways, 2016). In this study, it was determined that the positive religious coping levels of the patients were high, and their negative religious coping levels were moderate. In a study conducted with patients who had suffered a myocardial infarction, it was found that the participants had high levels of religious coping, and there was no difference between the religious coping levels of the patients in 0–6 months after their myocardial infarction and 7–24 months after their myocardial infarction (Akin, 2019). In a study conducted with ACS patients discharged from the hospital, 85% of the patients stated that they had gained strength/comfort from religion in restoring their former health, and at the end of six months of follow-up, an improvement was found in the overall physical and disease-specific quality of life of the patients in relation to their turning to religion (Abu et al., 2019). Similarly, in a study of individuals with cardiovascular disease, it was found that initially, as well as in the first and second years, there was no difference in the individuals' levels of religious coping; however, increases in these levels were found to improve the individuals' quality of life (Trevino & McConnell, 2014). In other studies, it was determined that patients use their religious beliefs to accept the reality of the disease and its stages (Mangolian Shahrbabaki et al., 2017), and positive religious coping behavior levels are high among patients (Magyar-Russell et al., 2014; Park et al., 2014). It is expected that ACS patients use a high level of positive religious coping styles in Turkey. This is because the majority of the population of Turkey is Muslim, and according to Islamic beliefs, "Allah, who exposes a person to disease, also gives him strength by restoring his health" and "illness is seen as a kind of warning, test and reason for spiritual education that Allah gives to His servants" (Atmaca, 2010). Therefore, individuals adhering to the religion of Islam strive to find healing for their diseases through religious practices.

Religious coping is seen as an important mechanism that buffers the impact of a number of risk factors for depressive symptoms (Whelan-Gales et al., 2009). Religion may protect individuals spiritually as a motivational tool that reduces pain and suffering and supports their power of clinging to life by promoting feelings such as patience, sacrifice and struggle (Altintas, 2015). In this study, no significant relationship was found between the positive and negative religious coping levels of the patients and their depression levels, and depression did not have a predictive effect on positive religious coping. In the literature, there has been a discrepancy between religious coping and depression in individuals diagnosed with cardiovascular diseases. In a study conducted with ACS patients, it was determined that the incidence of severe depression was similar among those who perceived strength and comfort from religion as high and those

who did not (Abu, et al., 2019). In another study, there was no relationship between religious coping and depressive symptoms in patients at their one- and six-month follow-ups (Bekke-Hansen et al., 2014). A study conducted with cardiac surgery patients did not identify a significant relationship between postoperative depression levels and positive religious coping, while a positive significant relationship was found between depression levels and negative religious coping. In the same study, the authors reported that religiosity does not have a direct effect on postoperative distress (Ai et al., 2007). In contrast to these studies, it was determined that the frequency of worship was associated with depression in patients who were followed up after myocardial infarction, and the depression levels of those who did not worship at all were higher (Blumenthal et al., 2007). A study conducted with advanced coronary artery disease patients showed a negative relationship between health anxiety and religious spirituality, and the level of religious spirituality significantly and negatively predicted the level of health anxiety (Heshmati et al., 2021). In another study, it was found that faith-related coping strategies (for example, using prayer to cope and subjective religiosity) before cardiac surgery predicted less depression and anxiety in the long term (Ai et al., 2010). Other studies have also determined that positive religious coping is associated with low levels of depression (Assari et al., 2014; Contrada et al., 2004; Dehghanrad et al., 2020; Eways, 2016; Park & Dornelas, 2012; Whelan-Gales et al., 2009). In this study, the absence of a relationship between positive religious coping and depression was thought-provoking. This may have been related to the finding that the depression levels in the Muslim patients who constituted the sample of this study were low. Regarding this issue, according to the belief of Islam, this world is a place of trial, and a person will see the reward of every move he makes in this world in the afterlife. Such faith in the afterlife may save a person from the anxiety and stress that they may face, both by accepting the idea of death and by thinking that some of their troubles related to their disease and other troubles encountered in this world will be resolved in the afterlife (Cengil, 2003).

In this study, it was determined that the gender, education level of the patients and their ability to perform daily life activities were significant predictors of their positive religious coping levels. There are no findings of similar studies in the literature. However, contrary to this finding, in a study conducted with patients with advanced coronary artery disease, the level of religious spirituality was not found to be related to age, gender or education (Heshmati et al., 2021). A study conducted with the general population in Turkey revealed that the level of religiosity increases as the person's age increases, women state that they are more religious than men, and their thoughts about religiosity do not significantly change according to their level of education (Nisanci & Aysan, 2019). According to the information in the literature and the findings of this study, it seems that more studies are needed to determine the factors that determine positive religious coping levels in ACS patients.

Limitations of the Study

There were some limitations of this study. Since the study was conducted in a certain time frame with patients diagnosed with ACS in a single institution, it had a sample and time limitation. Additionally, information on depression and religious

coping was based on the participants' self-reports. It was also seen as an important limitation that the patients were not followed up for a long period of time after their diagnosis, and therefore, their relationship with the disease could not be revealed exactly. Nevertheless, this is the only study in Turkey that questioned the religious coping styles of ACS patients and the relationship of these styles with the depression levels of these patients. It is expected that it will shed light on approaches to strengthen positive religious coping in supporting the process of adaptation of patients to their disease.

Conclusion

ACS, which may involve some psychological health problems and require coping with these problems along with a new lifestyle after the diagnosis of the illness, is one of the diseases that should be closely monitored by health professionals. In this study, the general depression levels of the ACS patients were determined to be low. On the other hand, one-fifth of them showed moderate-severe levels of depressive symptoms. Moreover, it was found that the patients adopted positive religious coping styles on a high level, but there was no relationship between their positive religious coping levels and depression levels. In accordance with these findings, it will be the most basic approach for health professionals to closely monitor ACS patients after their diagnosis in terms of depressive symptoms, as well as physical health checks, and provide psychological support for patients who are in the at-risk group. Additionally, health professionals should know that patients may use positive religious coping styles to support their well-being and recovery against this life-threatening disease, and they may encourage patients in this direction. It is also recommended to conduct studies on larger populations of ACS patients, taking into account the harmful effects of depressive symptoms on health, as well as the impact of coping styles.

Declarations

Conflict of interest All the authors declare that there is no conflict of interest.

Ethical Approval Written authorizations were obtained from the University of Health Sciences Hamidiye Scientific Research Ethics Committee (Dated 30.07.2021 and Numbered 21/517) and the head physician of the hospital where the study was conducted.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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