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Examination of Health Fatalism And Health Literacy In Patients With Heart Failure

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ABSTRACT

This research was conducted to determine the level of health fatalism and health literacy in patients with heart failure and to examine the relationship between them.

The population of the research consisted of patients with heart failure who applied to the cardiology clinic and outpatient clinic between February and December 2021. The sample consisted of 210 patients who met the research criteria between the specified dates. The data were collected face-to-face using the "Patient Introductory Information Form", "Religious Health Fatalism Scale" and "Health Literacy Scale".

The mean score of religious health fatalism was 57.19±12.38 and the mean score of health literacy was 70.49±14.27. It was determined that there was a negative relationship between religious health fatalism and health literacy of patients with heart failure at $p<0.01$ level and this relationship was statistically moderate. As a result of the regression analysis, it was found that religious health fatalism was a statistically significant and negative predictor of health literacy.

It was concluded that patients had high religious fatalism and poor health literacy. In addition, it was determined that health literacy of heart failure patients decreased as religious health fatalism increased.

Keywords: Religious health fatalism, heart failure, health literacy

Introduction

Heart Failure is a clinical condition in which the heart structure or function is abnormal, and the patients have such signs and symptoms as dyspnoea, fatigue, liquid retention, and shortened life span.(1) The American Heart Association (AHA) predicts that by 2030, more than 8 million adults in the United States will have HF. According to the results of the HAPPY study conducted by the Turkish Society of Cardiology (TKD), more than 2 million people in Turkey have heart failure. Again, according to the results of the same study, the fact that nearly 50% of heart failure cases are composed of individuals over the age of 60 suggests that this rate will increase with the increase in life expectancy.(2) Health literacy is an important issue in patients with HF because there is no complete cure in the treatment of the disease, the treatment continues for life and it is a complex syndrome.(3) On the other hand important services provided by nurses lead to the decreased morbidity and mortality rates and increased health literacy, resulting in a decrease in health fatalism in HF patients.(4)

A person who links his/her health to fate perceives his/her health as beyond one's control and instead dependent on luck, fate or Allah. (5) Believing in fate, which is one of the conditions of Islam, is common in Turkish society.(6) Belief in fatalism will strongly influence an individual's attitudes and behaviors. Since the possibility of changing events and situations is low in fatalism, expectations of self-care, self-efficacy, development, change and achievement are limited. (7) Religious beliefs can help patients to relax emotionally, and provide support for recovery and coping with illness.(8) Religious and sociocultural beliefs influence attitudes towards illness, treatment and care. (9)

Beliefs affects as positive or negative effects to health. (10) Leyva et al. (2014) provide examples of the negative health effects of fatalism.(11) Çarkoğlu and Kalaycıoğlu (2009) found that almost half of respondents in Turkey believe that there is little they can do to change their lives. (12) However, Nageeb et al. (2018) showed that having a Muslim population provides a positive example of the effects of fatalism (10) Patients rely on ordinary beliefs to make health-related decisions. (13).

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While health fatalism reflects the belief that health problems are often beyond human control, (10) health literacy is an individual's attempts to improve their own health. (14) Health literacy is a responsibility shared by individuals, as well as the general public, health care providers, academia, religious organizations, community organizations and the media. (15) Health literacy is associated with delayed recognition of illness, delayed seeking of medical care.(16)

Inadequate health literacy, low medication adherence, inadequate wound/drain care, increased complications and hospital readmissions, longer hospital stays, prolonged return to activities of daily living, and increased risk of death have been found. (17) It is also common to find that health literacy is associated with poor treatment adherence and poor self-care. (16) Low health literacy among heart failure patients is a barrier to self-care and is associated with increased mortality, making it an important public health problem. Patients with heart failure and reduced health literacy lead to higher emergency care, re-hospitalization within 30 days, death and increased costs. (18) These findings have important clinical and public health implications and require measurement of health literacy and implementation of interventions to improve outcomes. (19)

Considering that the majority of people living in Turkey are Muslim and the number of heart failure cases is increasing, examining the relationship between health fatalism and health literacy in heart failure patients will improve the quality of nursing care to be provided for the management of patients' diseases. This research was conducted to determine health fatalism and health literacy in patients with heart failure and to examine the relationship between them.

Material and Method

Research Type: This study was descriptive and correlational.

Place, Time and Characteristics of the Research: The study was conducted with patients with chronic heart failure who applied to the cardiology clinic and outpatient clinic of Fırat University Hospital between February and December 2021.

Population and Sample: The population consisted of heart failure patients who applied to the cardiology clinic and outpatient clinic between February and December 2021. The sample consisted of patients who met the research criteria.

Within the scope of the study, 232 patients with heart failure were reached. Since 12 of the patients did not meet the research criteria, 7 of them did not want to participate in the study and 3 of them declared their wish to withdraw from the study during the data collection phase, the study was completed with 210 patients.

Inclusion criteria for the study

- Being over 18 years old
- Knowing how to read and write
- Ability to communicate adequately
- Not having psychiatric problems

Data Collection Tools: Data were collected by the researchers. "Patient Introductory Information Form", "Religious Health Fatalism Scale" and "Health Literacy Scale" were used for data collection.

Patient Introductory Information Form: This form, which was prepared by the researchers based on the literatüre.

Religious Health Fatalism Scale: In the study, the Religious Health Fatalism Scale developed by Franklin, Schlundt, and Wallson was used. (5) The Turkish validity and reliability of the scale was confirmed by Bobov and Çapık. (8) The scale aims to discover whether health fatalism is associated with health behaviors. It also aims to help remove cognitive barriers to positive health behaviors, health services and healthy living practices. The Turkish version of the scale has a single dimension consisting of 17 five-point Likert-type items. The minimum score is 17 and the maximum score is 85. As the scale score increases, the level of fatalism increases. In the original study, Cronbach's alpha value was calculated as 0.91. In this study, Cronbach's alpha value was 0.89.

Health Literacy Scale: Health Literacy Scale (Health Literacy Index) simplified by Toçi, Bruzar and Sorenson was used in the study. (20) The Turkish validity and reliability study of the scale was conducted by Aras and Bayık Temel (2017). The Health Literacy Scale consists of 25 items and four sub-dimensions. (21) The minimum score that can be obtained from the scale is 25 and the maximum score is 125. The scale has a 5-point Likert structure. All items of the scale are positive. Low scores indicate that the health literacy status is inadequate, problematic and poor, while high scores indicate that it is adequate and very good. As the score increases, the health literacy level of the individual increases. (20) In the original study,

Cronbach alpha value was calculated as 0.95. (20) In this study, Cronbach alpha value was 0.91.

Data Collection: The data of the study were collected by the researchers using face-to-face interview technique. After the patient was interviewed, the purpose of the study was explained. After their verbal consent was obtained, the questions in the data forms were asked to the patients one by one. The answers given by the patients were marked on the forms. The process of filling out the data forms took approximately 5-10 minutes.

Research Questions: What is the level of health fatalism of CHF patients?

What are the health literacy levels of CHF patients?

Is there a relationship between health fatalism levels and health literacy levels of CHF patients?

Data analysis: SPPS 21.0 package program was used to evaluate the data obtained from the study. Frequency, percentage, mean, standard deviation, Pearson correlation were used to evaluate the data. In addition, multiple linear regression analysis was performed to determine the prediction levels of independent variables on dependent variables. P< 0.05 was accepted as significance level.

Challenges and Limitations of the Study: The primary limitation of this study is that all 210 samples of chronic heart failure patients applied to the Cardiology Department of Fırat University Hospital. Therefore, the limitations of the study are that it was conducted in only one institution, it was not compared with different hospitals and different chronic diseases, and it was conducted between certain dates.

Ethical Principles: Before starting the study, the necessary permissions were obtained from the Non-Interventional Ethics Committee of Fırat University. Institutional permission was obtained from Fırat University Hospital for the research. During the collection of the research data, verbal consent was obtained by fulfilling the principle of "Informed Consent" by informing the individuals about the research.

Result

It was found that 50% of the patients were 66 years of age or older, 51.9% were female, 39.5% were literate, 91% were married, and 65.7% had income equal to expenses. In addition, 76.8% of the patients were employed, 37.6% had HT disease, 46.2% had a duration of disease between 3-10 years, and 47.1% used 6 or more medications (Table 1).

The mean total score of the Religious Health Fatalism Scale was 57.19±12.38. The mean total score of the Health Literacy Scale was 70.49±14.27; the "Access to Information" sub-dimension was 14.23±3.56, the "Understanding Information" sub-dimension was 24.13±5.39, the "Valuation/ Evaluation" sub-dimension was 22.23±5.45, and the "Application/ Use" sub-dimension was 13.92±4.22 (Table 2).

It was determined that there was a negative relationship between religious health fatalism and health literacy of patients with heart failure at $p<0.01$ level and this relationship was statistically moderate ($r=-.446^{**}$, $p= .000$).

It was determined that the independent variable, Religious Health Fatalism, significantly affected the total score of the dependent variable, Health Literacy, negatively and explained 25% of it (Table 4). In addition, among the other independent variables (age, gender, educational status), only education was found to be a statistically significant predictor of Religious Health Fatalism in a negative direction ($\beta=-.205$, $p<0.05$) in Model 1. In Model 2, only age was found to be a statistically significant predictor of Health Literacy in a negative direction ($\beta=-.275$, $p<0.05$).

Discussion

Since there is no study in the literature on health fatalism in individuals with heart failure, the results of this study will be discussed in relation to studies on other chronic diseases. Heart failure patients who participated in this study were found to have high health fatalism (57.19±12.38). People in eastern Turkey are reported to have high levels of health fatalism. (8) Studies conducted with epilepsy patients found high levels of health fatalism. (22, 23) Molaei-Zardanjani et al. (2019) found that healthy women who did not have regular mammography screening for breast cancer had high levels of health fatalism.(24). In a study conducted by Özer et al. (2022) with hemodialysis patients, it was reported that health fatalism was

Table 1. Distribution of Sociodemographic Characteristics of Patients

CHARACTERISTICS		n	%
Age	25-40	37	17.6
	41-65	68	32.4
	66 and above	105	50.0
Gender	Female	109	51.9
	Male	101	48.1
Education Status	Literate	83	39.5
	Primary School	78	37.1
	High school and above	49	23.3
Marital Status	Married	191	91.0
	Single	19	9.0
Income Status	Income Less than Expenses	33	15.7
	Income Equals to Expenses	138	65.7
	Income More than Expenses	39	18.6
Employment Status	Yes	45	21.4
	No.	165	78.6
Comorbidity	None	21	10.0
	DM	78	37.1
	HT	79	37.6
	COPD	19	9.0
	Asthma	7	3.3
	Kidney Failure	6	2.9
Duration of disease	1-2 years	44	21.0
	3-10 years	97	46.2
	11 years and above	69	32.9
Number of medicines	1-2	34	16.2
	3-5	77	36.7
	6 and above	99	47.1

Table 2: Total Mean Scores of Patients' Religious Health Fatalism Scale, Health Literacy Scale and Subscales

	Min	Max	$\overline{X}$ ±SD
Total Religious Health Fatalism Scale	27	85	57.19±12.38
Total Health Literacy Scale	25	112	70.49±14.27
Access to Information	5	22	14.23±3.56
Understanding Information	11	35	24.13±5.39
Valuation/ Evaluation	8	39	22.23±5.45
Application/ Use	5	23	13.92±4.22

high. (25) In a study conducted by Öncü et al. (2021), it was found that fatalistic tendency was high in those who had Covid-19 disease. (26) The results of this study were similar to the literature. In Turkish society, the disease is perceived as "coming from Allah" "Allah gave it to me, so there is nothing to do about it" is accepted. Almost all of the Turkish society (99%) belong to the religion of Islam. As a requirement of this belief, individuals belonging to this religion believe that illnesses are a test from Allah and thus accept illnesses more quickly. (23) Such high levels

Table 3: Mean Total Scores of the Scales and the Relationship Between Them

	r/p Test Values	Religious Health Fatalism Scale	Total Health Literacy Scale	Access to Information	Understanding Information	Valuation/ Evaluation	Application/ Use
Religious Health Fatalism Scale	r	1	-.446**	-303**	.922**	-.365**	-.460**
	p		000	.000	.000	000	.000
Total Health Literacy Scale	r	-.446**	1	.769	-.419**	.840**	.728**
	p	000		.000	000	.000	.000
Access to Information	r	-303**	.769	1	-.292**	.497**	.454**
	p	.000	.000		000	.000	.000
Understanding Information	r	.922**	-.419**	.292**	1	-.350**	-.428**
	p	000	.000	.000		.000	.000
Valuation/ Evaluation	r	-.365**	.840**	.497**	-.350**	1	.499**
	p	000	.000	.000	.000		.000
Application/ Use	r	-.460**	.728**	.454**	-.428**	.499**	1
	p	000	.000	.000	.000	.000	

of fatalism are likely to have a negative impact on health service utilization and delivery. It is thought that individuals with a high perception of fatalism will also negatively affect health literacy.

In the study, it was determined that the health literacy level of patients with heart failure was poor (70.49±14.27) (Table 2). In a study conducted by the Ministry of Health in Turkey, it was found that 68.9% of the participants had inadequate or problematic health literacy. (27) On average, 39% of heart failure patients have low health literacy. Namukwaya et al. (2017) found that there was not a high level of health literacy among heart failure patients in Uganda. (13) A meta-analysis of fifty-one studies found that one-third (32%) of patients had limited health literacy(28). Tung et al. (2014) found that 60% of patients with heart failure had inadequate or low health literacy. (29) Jovenic et al. (2018) found that more than half (64%) of patients with heart failure had limited health literacy. (30) Fabbri et al. (2020) found a high prevalence of inadequate health literacy in patients with heart failure (19). In a study conducted to determine the level of health literacy of the adult population in Turkey, it was determined that 64.6% of the population had problematic or inadequate health literacy. (31) On the other hand, Chen et al. (2011) found that participants had adequate health literacy (71.4%) in their study with patients with heart failure. (32) In Çimen and Bayık Temel's study, the health literacy level of patients with chronic diseases was found to be high (87.96±13.89). (33) The findings obtained from the study were lower than other studies, which can be explained by the difference in the sample group. In addition, the fact that the majority of the patients in the group were over 65 years of age (Table 1) is also an important factor. Since health literacy is a perception, people's perceptions and awareness of this issue may have affected this situation. The findings of the study are consistent with the literature and show that there is a need to plan and implement interventions to increase the health literacy of heart failure patients.

It was determined that there was a significant negative relationship between religious health fatalism and health literacy in patients with heart failure and this relationship was statistically moderate (Table 3). When the literature was examined, no study examining the relationship between health fatalism and health literacy in any disease group both nationally and internationally was found. This situation also shows the originality of the study. The concept of fatalism is associated with mystical beliefs. Therefore, it is considered negative that individuals with high perception of fatalism have an inverse relationship with health literacy. It is thought that reducing individuals' perception of health fatalism will have a positive effect on health literacy. However, the literature on health fatalism largely includes the

Table 4. Results of Regression Analysis Related to Explanation Health Literacy and Religious Health Promotion According to the Descriptive Characteristics

Dependent Variables	Independent Variables	B	S.E	β	t	p	95% Confidence interval	
							Lower	Upper
Religious Health Fatalism Scale	Education	-3.259	1.151	-.205	-2.831	.005	-5.529	-.989
Health Literacy Scale	Constant	80.865	12.757		6.339	.000*	55.709	106.022
	Age	-.246	.074	-.275	-3.320	.001	-.392	-.100
	Religious Health Fatalism Scale	-.506	.077	-.438	-6.593	.000*	.354	.657

*p<0.001, Model 1 R: 0.580 R^2: 0.337 F:7.649 p<0.05 Durbin Watson:2.210
Model 2 R: 0.504 R^2: 0.2547 F:6.765 p<0.05 Durbin Watson:2.071

finding that fatalism has a negative effect on health behaviors. Within the framework of fatalism, the association of heart-related diseases with death is thought to be a factor underlying the reluctance towards preventive behaviors. It is expected and risky for patients with low health literacy to have higher levels of fatalistic beliefs, especially in Muslim patients. Therefore, it is important to carry out interventions aimed at improving health and increasing health literacy.

The education level factor significantly predicts the religious health fatalism of the patients. (Table 4) This finding is similar to the results of studies showing that lower education levels have more fatalistic beliefs in people with epilepsy. (23, 34)This finding may be explained by the generally low educational level of the elderly patients in our sample group (76.6% of them graduated from primary school and below) and the high spiritual tendencies of elderly patients.

Age factor significantly predicts the health literacy of the patients. (Table 4) This finding is similar to the results of studies showing that individuals with low literacy tend to be older. (29, 35) However, age is not a modifiable factor and increasing health literacy in the elderly is a difficult task. Furthermore, learning by video may be an appropriate way to improve health literacy in individuals with low health literacy. (36)

In the literature, there are studies showing that the level of health literacy increases as the level of education increases. (37, 38) It is thought that a high level of education is a factor affecting the level of health literacy because it can enable people to access accurate information, understand the information and apply and use it. In the study, it was shown that the majority of the patients (76.6%) graduated from primary school or below (Table 1). On the other hand, Charoghchian Khorasani et al. (2018) reported that health literacy levels increased as income levels increased (38). In this study, only 18.6% of the patients had an income level higher than their expenses (Table 1). In this study, the low health literacy of patients with heart failure may be attributed to their low levels of education and income. These results draw attention to the need to take measures to increase the health literacy levels of patients with low education and income levels so that they can make the right health decisions.

It is very important to improve the health literacy levels of patients with heart failure, as poor health literacy in patients with heart failure may lead to low levels of knowledge about the condition, poor adherence to medication regimens, poor self-care, less self-efficacy, heart failure flares and more frequent emergency service use. In this study, it was concluded that patients had high levels of religious health fatalism and poor levels of health literacy. Moreover, it was determined that health literacy decreased as the fatalism of heart failure patients increased. It is recommended that nurses should periodically evaluate the relationship between health fatalism and health literacy in patients with heart failure. No previous study examining the effects of health fatalism and health literacy in patients with heart failure was found. Therefore, further studies are also recommended.

Nurses have an important role in health education, especially in patients with chronic

diseases such as heart failure. Heart failure may be related to health promotion and high level of adherence to treatment and reduction in the occurrence of re-hospitalization and mortality in heart failure patients. In addition, given the paucity of national literature, the importance of studies that subsidize detailed health education strategies that address the real needs of the population should be emphasized. These findings have important clinical and public health implications. They require measurement of patients' religious health fatalism and health literacy and implementation of interventions to improve outcomes.

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