



# The Reliability and Validity of the Religious Health Fatalism Scale in Turkish Language

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## Abstract

This study aimed to conduct the reliability and validity study of the Religious Health Fatalism Scale in Turkish language. The study carried out in methodological type and consisted of 500 individuals. The basic component analysis was applied to the 17-item scale, and it was decided that the Turkish version of the scale would have one sub-dimension. Factor loads were over 0.30 for all items, and the explained variance of the scale was found 42.70%. The Cronbach's  $\alpha$  coefficient was determined to be 0.91. Consequently, it was determined that the Religious Health Fatalism Scale had one dimension in the Turkish language, and it was a highly valid and reliable tool. It was determined that the elderly, females, housewives, illiterate, people with no health insurance, married individuals, those with low income, and people with chronic diseases had higher health fatalism scores.

**Keywords** Fatalism · Religion · Health · Nursing · Validity and reliability

## Introduction

Health is the extent to which people can fulfill their needs and wishes, cope with the social environment they live in, adapt to, and change the environment. Therefore, health is the source of the daily life, in addition to being a purpose of life (Oz 2010). Nowadays, the cultural changes play an important role in increasing health-related problems. Fatalism, which is a cultural feature, is the explanation of any incident encountered by people in their life by the providence of God, the supernatural power. It is accepted that the providential destiny cannot be changed by the power and efforts of people, and the incidents that occur are inevitable. In conjunction to this, destiny incorporates the belief that people cannot control their own lives and change anything, and they do not have the chance to make a choice (Kasapoglu 2008; Sobol-Kwapinska 2013). Throughout history from the ancient times to present, the concept of fatalism has also been expressed as people feel helplessness against natural and supernatural powers (Kasapoglu 2008). The first examples of fatalism are found in the Greek mythology. For example, the fact that Oedipus killed his

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father and married his mother in the Oedipus legend reflects the belief that destiny cannot be changed despite all efforts (Holton 2013).

While certain studies show that the relationship between religion and health behaviors is positive, studies that have been recently carried out in different fields have determined that individuals do not exhibit or ignore certain health behaviors due to their mental and spiritual beliefs (Levin 1996). For example, Myers et al. state that fatalism is negatively correlated with early diagnosis behaviors (Myers et al. 2000). Similarly, in a qualitative study carried out by Sharf et al. (2005), it was determined that patients with lung cancer felt safe without seeking for treatment as a result of a fatalistic belief. In the studies of Powe (1995a) and Powe and Finnie (2003), the researchers determined that age, the status of income, the level of education, and access to health services were important parameters for fatalism. According to the results of the study, the elderly and patients with low income or low level of education generally exhibit fatalistic beliefs. In the study of Mayo et al. (2001), it is reported that females with high cancer fatalism have taken less mammography. In another study of Powe (1995a), the rate at which individuals not participated in the fecal occult blood test, which must be examined for colorectal cancer screening, is also the most important determinant of fatalism. In a similar way, it was determined in the study carried out by Unger et al. (2002) that many health warnings were ignored due to the fatalistic understanding, which was mostly prevalent among adolescents, and they were of the opinion that “if there is a health problem in my destiny, there is nothing that I can do to prevent these problems”.

It is observed that many measurement tools are used in various studies carried out on fatalism. For example, the Powe Fatalism Inventory developed by Powe for cancer aims to measure fatalistic attitudes toward cancer with such components as fear, pre-indications, pessimism, and helplessness (Powe 1995b). Furthermore, Shen et al. (2009) try to measure the perception of fatalism with the components predetermination, luck, and pessimism. There are fatalism scales developed in many different fields in the international literature. Upon investigating the studies on fatalism in Turkey, it is observed that the studies were mostly carried out in the field of religion. However, it is observed that the studies carried out in recent years to determine attitudes toward various types of cancer such as pessimism, fear, the inevitability of death are found in sources, and the psychological dimension of the concept of fatalism is not investigated sufficiently (Kaya and Bozkur 2015). In their study entitled “Development of Fatalism Tendency Scale: Validity and Reliability Study”, Kaya and Bozkur (2015) developed a measurement tool with the necessary psychometric properties for the measurement of fatalism tendency among high school and university students in the Turkish language. Detailed information on health fatalism in the Turkish literature was not encountered in the previous literature reviews. Therefore, the studies on fatalism in the health sphere in Turkey are quite limited. Among these limited studies, personal features were investigated in the perception of the disease in tuberculosis cases in the study carried out by Arikan et al. (2000), and it emphasized the belief that “Tuberculosis disease comes from God, just as other diseases” was prevalent among individuals. In other words, it was understood in this study that patients accepted tuberculosis with a fatalistic approach and created no emotional reaction regarding the disease. Another study carried out in Turkey, and that can be regarded within the scope of the fatalism and health patterns, is the Prostate Cancer Fatalism Inventory developed by Powe and adapted into Turkish by Aydogdu et al. (2016). In this study, it was also determined that fatalism negatively affects the behaviors related to the early examination, diagnosis, and treatment of prostate cancer. Another characteristic of this study is that it is among the first studies carried out on health fatalism in Turkey.

The absence of a comprehensive scale developed for the general health fatalism in Turkey constituted the starting point of this study. The Religious Health Fatalism Scale developed by Franklin, Schlundt, and Wallson in 2008 and consisting of 17 items aims to determine whether general health fatalism is related to protective health behaviors. The scale aims to help eliminate the cognitive barriers toward health behaviors, health service, and healthy life practices (Franklin et al. 2008). It is believed that no standard measurement tool is used in the studies carried out on fatalism because the measurement tools for health fatalism are not sufficient in Turkey. Therefore, the aim of this study is to carry out the validity and reliability study of the Religious Health Fatalism Scale in the Turkish language and its adaptation to Turkish cultural and social terms.

## Materials and Methods

### Type of the Research

Carried out methodologically, this study was completed between May and December 2016. The stages of the study were as follows: (1) Turkish language adaptation of the Religious Health Fatalism Inventory and its translation back to English, (2) testing the content validity of the inventory by an expert group, (3) administering the psychometric analysis (factor analysis, validity coefficient, and item–total correlation).

### Study Sample and Participants

The study was carried out in Erzurum, a city in eastern Turkey. In methodological studies, it is requested that the sample should be at least 10 times the number of items (Sencan 2005). While the scale addressed in our study consisted of 17 items, the sample was supposed to be 170, but considering the available opportunities for the better revealing factor structure, 500 participants were included in the study. The data of the study were collected by the researchers using the face-to-face interview technique. Table 1 presents the demographic characteristics of the participants included in the study.

As seen in Table 1, 57.4% of the participants were women, and 32.4% primary school graduates. 87.2% were married, 91% had health insurance, and 46.4% had equal income and expenses. 41.2% of the participants were housewife, and 73.6% had any chronic disease. The ages of the participants ranged between 30 and 80, and mean age was  $44.06 \pm 11.76$ .

### Conditions of Inclusion in the Study

The sample group of the study consisted of healthy individuals at the age of 30 and above. The age of 30 years was chosen with the understanding that religious attitudes among individuals turn into a lifestyle at this age. Moreover, all participants with no communication problems were taken into the scope of the study.

### Translation Process and Internal Validity

Measuring items were translated from original language into Turkish separately by four academic member experts in public health nursing who know Turkish and English well. While translating, it was paid attention to use the most appropriate sentence structure and

**Table 1** Demographic characteristics of the participants ( $n = 500$ )

	<i>n</i>	%
<i>Gender</i>		
Women	287	57.4
Men	213	42.6
<i>Education</i>		
Illiterate	31	6.2
Literate	24	4.8
Primary school	162	32.4
Secondary school	69	13.8
High school	94	18.8
University +	120	24.0
<i>Marital status</i>		
Married	436	87.2
Single	64	12.8
<i>Health insurance</i>		
Yes	455	91.0
No	45	9.0
<i>Income</i>		
Income less than expenses	211	42.2
Equal income and expenses	232	46.4
Income more than expenses	57	11.4
<i>Profession</i>		
Unemployed	15	3.0
Officer	58	11.6
Worker	31	6.2
Retired	56	11.2
Housewife	206	41.2
Other <sup>a</sup>	134	26.8
<i>Chronic disease</i>		
Yes	132	26.4
No	368	73.6
Min–Max	Mean	SD
<i>Age</i>		
30–80	44.06	11.76

<sup>a</sup>Self-employed, student, artisan, baby or elderly caregiver, driver, lawyer, pharmacist

phrases in the language. Then these translations were evaluated by the researchers, and Turkish form of measuring was reorganized. This form was translated into English again by two independent linguistic experts, and this translation was compared with its original in its original source language, and then Turkish phrases of the items, which are not the same as their originals, were revised.

## Content Validity

After the translation was complete, the inventory was presented to a group of experts consisting of 10 nursing/midwifery academics. The experts whose opinions were taken through e-mail assessed the inventory in terms of comprehensibility and cultural appropriateness. Davis technique was used in content validity administration, which was based on expert opinions (Gozum and Aksayan 2002). According to the Davis technique, in which quartet rating is used, the experts assessed the items of the inventory as follows:

1. Not convenient,
2. The item needs improving for appropriateness,
3. Convenient, yet needs minor changes,
4. Very convenient.

Following this assessment, content validity index (CVI) was obtained by dividing the sum of the first two ratings by the number of experts. When CVI was greater than 0.80, it was considered sufficient in terms of the content validity of the item (Gozum & Aksayan, 2002). After the translation and content validity process was completed, the final version of the inventory was piloted to a group of 30 subjects. At this stage, no changes were made to the items.

*Factor structure and the examination of internal validity* The scale that took its final form was applied to a sample group of 500 individuals, and proofs were sought in relation to the validity and reliability of the scale by applying the KMO, Bartlett's test, explanatory factor analysis, confirmatory factor analysis, internal validity analysis, and item–total correlations to the data obtained.

## Data Collection Tools

All the participants in the study were administered two forms, the Religious Health Fatalism Scale and a demographic form. The scale and the form were filled in about 7 min by each participant.

The demographic form consisted of eight items investigating age, gender, education, marital status, health insurance, income, profession, and chronic disease.

The Religious Health Fatalism Scale was developed by Franklin, Schlundt, and Wallston in 2008. The researchers developed the Health Fatalism questionnaire for an Afro-American society. The authors that developed this scale aimed to determine a pattern between health fatalism and preventive health behaviors. Therefore, they attempted to be helpful by assessing the potential and cognitive barriers in the use of health services and healthy life practices (Franklin et al. 2008). The scale is of Likert type that is answered as strongly disagree, disagree, undecided, agree, and strongly agree. The scale incorporates 17 items and 3 sub-dimensions. Among these sub-dimensions, the divine provision factor consists of items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 and reveals the belief that “God will provide good health”. Another structure, the destined plan consists of items 12, 13, 14, and 15 and measures the belief that the health status of an individual is part of a plan that is determined by God. Lastly, helpless inevitability consists of items 16 and 17 and measures the belief that an individual has little or no control over one's own health. The scores that can be obtained from the scale vary between 17 and 85. The increase in the score shows that fatalism increases. The scale can be filled in within 5–10 min, and the scale is suitable for all social classes.

## Evaluation of the Data

The demographic characteristics of the individuals were determined using descriptive statistics. Percentages were used in categorical data, and mean and standard deviations were utilized in continuous data. The data were analyzed using SPSS software (version 17) and LISREL (version 8.50). The principal component analysis was conducted to provide more accurate findings in the study. Prior to factor analysis, Kaiser–Meyer–Olkin (KMO) and Bartlett’s tests were administered to determine sampling adequacy and appropriateness for factor analysis. The varimax rotation process was applied to the data. After all these processes, whether the items fitted the theoretical structure was assessed using the structural equation modeling. Fit indices such as  $\chi^2/SD$ , GFI, AGFI, CFI, RMSEA, and SRMR were used at this stage. Cronbach’s  $\alpha$  coefficient and item–total correlations were employed to determine the internal validity. Also independent samples t test was used for the comparison of the two groups, and one-way Anova test was used for the multiple group comparisons. Skewness ( $-0.36$ ,  $SE = 0.110$ ) and kurtosis ( $-0.528$ ,  $SE = 0.220$ ) values were used in evaluating the normality distribution of the data.

## Strengths and Limitations of the Study

The study data were collected only in a province in the east of Turkey. Furthermore, the fact that the Turkish version of the scale has one sub-dimension may constitute an obstacle in the international comparison.

## Ethics of the Study

First, the permission was obtained on September 07, 2015, from Ken Wallston et al. via e-mail to start the study. The ethics committee permission of Ataturk University Faculty of Health Sciences ethics board committee and the written permission of the Public Health Institution of Turkey were also obtained in the study. The verbal/written consent of all participants was obtained while collecting the data, and they were informed to withdraw from the study anytime they wanted. The Declaration of Helsinki was complied within the study.

## Results

### Translation Process and Content Validity

Four nursing academics from the research team translated the inventory into Turkish independently and got similar results. Two linguists translating the inventory back to its original language obtained similar results, and they reached a common consensus on the translations. After the translation, the inventory was submitted to ten nursing/midwifery academics for reviewing in terms of content validity and cultural properties. After this evaluation, CVI was determined to be 0.88. The final form of the inventory was obtained by making some statement changes in accordance with expert opinions. Then the inventory was piloted to a group of 15 people. Following the pilot study, psychometric measurements were initiated without any modification on the items. The CVI scores of the items on the

**Table 2** Factor structure of Religious Health Fatalism Scale

Items	Factor loads for original structure (three dimensions)			Factor load for one dimension
	Divine provision	Destined plan	Helpless inevitability	
1. If I just pray to God about my health, He will work it out	0.787			0.766
2. When I am sick I give my burdens to God and let Him handle it	0.790			0.773
3. God will take care of my health because I have found favor in his sight	0.738			0.726
4. If God wants me to have better health, He will provide		0.661		0.621
5. I don't worry about my health because it is in God's hands	<b>0.510</b>	<b>0.550</b>		0.697
6. If I am sick, I have to wait until it is God's time for me to be healed	0.577			0.735
7. When I have a health problem, I pray for God's will to be done			0.337	0.498
8. As long as I stay focused in prayer, I will be healed of any sickness	0.559			0.747
9. Spiritual people should accept whatever God has meant for them		0.697		0.530
10. I trust God, not man, to heal me		0.668		0.607
11. If a person has enough faith, healing will occur without doctors having to do anything	<b>0.510</b>		<b>0.514</b>	0.755
12. Sometimes, God allows people to be sick for a reason			0.642	0.471
13. If I become ill, God intended that to happen		0.605		0.597
14. Whatever illnesses I will have, God has already planned it		0.683		0.655
15. Sometimes someone can be ill because of disobedience to God			0.688	0.630
16. I don't need to try to improve my health because I know it is up to God			0.715	0.688
17. I can control a small health issue, but only God can control a big health issue			0.631	0.485
Explained variance (%)				42.70
CVI	0.88			

Bold values indicate that the item has a high factor loading value in two different dimensions

scale, of which content validity is assessed using the Davis technique, vary between 0.8 and 1.0 (Table 2). Therefore, no item was removed from the scale in terms of the content validity.

## Structure Validity

Kaiser–Meyer–Olkin (KMO) and Bartlett’s test were administered to evaluate the appropriateness for sampling adequacy and factor analysis prior to the factor analysis. As a result of the analysis, KMO value of Religious Health Fatalism Scale was determined to be 0.940, and this value conformed principal component analysis. Similarly, the results of the Bartlett’s test ( $\chi^2 = 3778.877$ ,  $p = 0.000$ ) indicated that the data were interrelated and conformed the factor analysis (Gozum and Aksayan 2002). The scale, whose KMO and Bartlett’s test values were appropriate, was later administered principal component analysis. As a result of the analysis, the factor loads of Religious Health Fatalism Scale were determined to be over 0.30 for all items. However, it was determined the items 4, 7, 9, 10, 12, 14 in the Turkish version of the health fatalism scale that is three-dimensional in the original language slip to the divine provision and destined plan sub-dimensions (Table 2).

Therefore, it was decided to examine the scale one-dimensionally in the Turkish language. In Table 2, it is observed that when the Turkish version of the Religious Health Fatalism Scale is examined one-dimensionally, the factor loads vary between 0.47 and 0.77. The total variance is 42.7%. At this stage, no item was removed from the scale since the factor loads of all items were above 0.30, and it was decided to accept the Turkish version with a single sub-dimension. The confirmatory factor analysis was performed after the explanatory factor analysis to obtain more precise findings in the study. The fit index values on the Health Fatalism Scale found as a result of the CFA are presented in Table 3.

As can be observed in Table 3, many fit indices were used in order to examine the model fit of the scale. Among these, the  $\chi^2/SD$  value was determined to be 3.87, GFI 0.98, AGFI 0.98, CFI 0.97, RMSEA 0.076, and SRMR 0.056. As a result of the relevant fit index values, it was decided that the model was acceptable in this state (with a single sub-dimension) (Wang and Wang 2012; Capik 2014). The PATH diagram of the model is presented in Fig. 1.

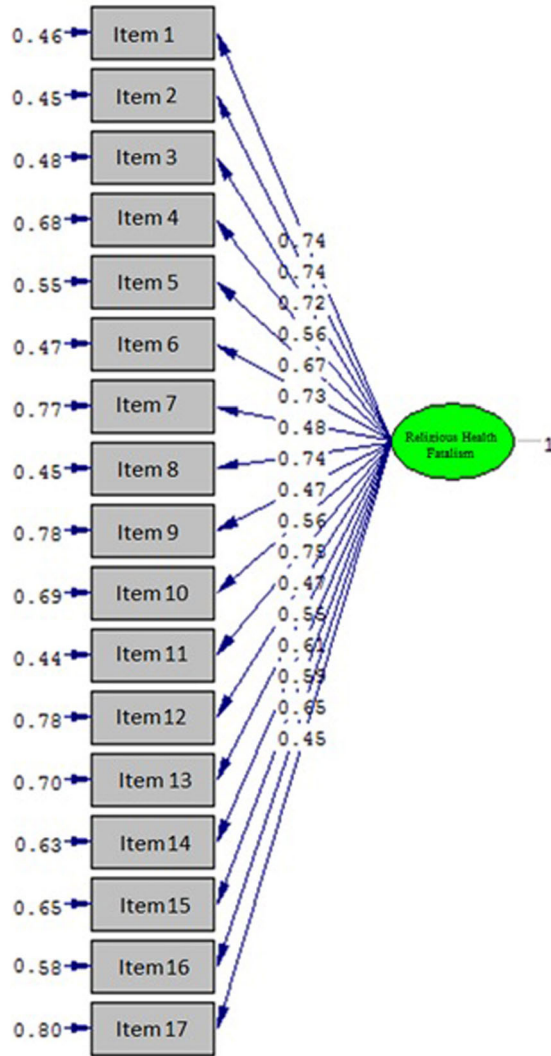
According to the findings of the explanatory and confirmatory factor analysis performed so far, it was determined that the 17-item Religious Health Fatalism Scale was suitable in the Turkish language with a single factor.

As it can be observed in Table 4, the Cronbach’s  $\alpha$  coefficient and item–total score correlation coefficients were calculated in order to determine the internal consistency and homogeneity of the Religious Health Fatalism Scale. The Cronbach’s  $\alpha$  coefficient of the Turkish version of the Religious Health Fatalism Scale was estimated to be 0.910, and the item–total correlations of the scale ranged between 0.43 and 0.71. It was determined that

**Table 3** Results of goodness of fit

Index	Normal value	Acceptable value	The value found in this study
$\chi^2/SD$	< 2	< 5	3.87
GFI	> 0.95	> 0.90	0.98
AGFI	> 0.95	> 0.90	0.98
CFI	> 0.95	> 0.90	0.97
RMSEA	< 0.05	< 0.08	0.076
SRMR	< 0.05	< 0.08	0.056





Chi-Square=445.52, df=115, P-value=0.00000, RMSEA=0.076

Fig. 1 PATH diagram for the Religious Health Fatalism Scale

the average score of the participants was  $61.27 \pm 12.39$ , and the score they obtained from the scale regarded as valid and reliable ranged between 17 and 85.

In addition to psychometric measurements, the study also involved some classical test comparisons. As a result of Spearman’s Rho correlation analysis conducted for this purpose, a significant positive relation was determined between age and fatalism ( $r = 0.170$ ,  $p = 0.005$ ). This finding indicated that as age increased, fatalism score increased as well. The change in the fatalism score based on other variables is presented in Table 5.

As it can be observed in Table 5, the average Religious Health Fatalism scores of the participants are different according to all socio-demographic features ( $p < 0.05$ ). The

**Table 4** Item–total correlations and values of Cronbach’s  $\alpha$  of Turkish version of Religious Health Fatalism Scale

Items	Mean		Item–total correlation	When the item is deleted Cronbach’s $\alpha$
	Original scale	Turkish scale		
1.	3.69	3.39	0.708	0.905
2.	3.77	3.48	0.712	0.905
3.	3.74	3.91	0.660	0.906
4.	3.63	4.42	0.558	0.910
5.	3.43	3.87	0.635	0.907
6.	3.57	3.12	0.681	0.906
7.	4.05	4.08	0.440	0.912
8.	3.42	3.39	0.693	0.905
9.	3.86	4.28	0.470	0.912
10.	4.12	4.28	0.547	0.910
11.	3.33	2.99	0.705	0.905
12.	3.87	3.78	0.430	0.912
13.	2.63	3.92	0.539	0.910
14.	3.25	4.11	0.601	0.908
15.	3.78	2.94	0.580	0.909
16.	2.07	2.33	0.643	0.907
17.	2.78	2.90	0.435	0.913
Cronbach’s $\alpha$				0.913

average Religious Health Fatalism score of females, married individuals, those without health insurance, and those who have chronic diseases is higher. Least significant difference (LSD) advanced analysis carried out in order to determine from which group the difference arose considering level of education, it was determined that the average scores of the illiterate participants were higher when compared to other levels of education. LSD advanced analysis carried out in order to determine from which group the difference arose considering economic status, it was found that the average score of those with low income was higher when compared to those with equal and higher income. LSD advanced analysis carried out in order to determine from which group the difference arose by the profession, it was determined that all profession groups had significantly different average scores. In this case, housewives have the highest average score, while civil servants have the lowest average score.

## Discussion

This study aims to provide the Turkish society with a new scale on health fatalism and adapt this scale to Turkey in cultural and social terms for performing the validity and reliability study of the Religious Health Fatalism Scale. The findings of the validity and reliability analyses of the Religious Health Fatalism Scale in the Turkish language, which consists of 17 items and single factor, are discussed in this section.

**Table 5** The change in fatalism score means based on demographic variables

Variables	Mean $\pm$ SD	Significance
<i>Gender</i>		
Women	63.09 $\pm$ 12.35	$t = 3.623$
Men	59.20 $\pm$ 10.98	$p = \mathbf{0.000}$
<i>Education</i>		
Illiterate	77.63 $\pm$ 7.74	$F = 55.059$
Literate	74.92 $\pm$ 8.96	$p = \mathbf{0.000}$
Primary school	64.73 $\pm$ 8.99	
Secondary school	61.43 $\pm$ 9.66	
High school	59.11 $\pm$ 10.68	
University +	51.83 $\pm$ 9.94	
<i>Marital status</i>		
Married	62.19 $\pm$ 11.88	$t = 3.738$
Single	56.27 $\pm$ 10.99	$p = \mathbf{0.000}$
<i>Health insurance</i>		
Yes	60.97 $\pm$ 12.09	$t = -2.773$
No	66.16 $\pm$ 8.89	$p = \mathbf{0.006}$
<i>Income</i>		
Income less than expenses	65.17 $\pm$ 11.98	$F = 26.292$
Equal income and expenses	59.99 $\pm$ 10.78	$p = \mathbf{0.000}$
Income more than expenses	53.60 $\pm$ 11.32	
<i>Profession</i>		
Unemployed	62.47 $\pm$ 13.72	$F = 14.892$
Officer	52.37 $\pm$ 9.48	$p = \mathbf{0.000}$
Worker	61.74 $\pm$ 12.46	
Retired	61.13 $\pm$ 11.85	
Housewife	65.67 $\pm$ 10.98	
Other	58.76 $\pm$ 11.20	
<i>Chronic disease</i>		
Yes	65.46 $\pm$ 11.65	$t = 4.549$
No	60.00 $\pm$ 11.67	$p = \mathbf{0.000}$

Bold values indicate  $p < 0.05$

The first stage of the scale adaptation studies is the language adaptation of the original scale. The translation-back-translation method that is the most prevalent method in our day was used in the language adaptation of the Religious Health Fatalism Scale (Gozum and Aksayan 2002; Oner 2009). At this stage, it was determined that the items of the original scale protected their meaning even when they were translated back into English. The scale was sent to 10 expert academicians via e-mail after the translation from the original language. The CVI of the scale that was scored by the academicians according to the Davis technique was determined to be 0.88. Therefore, it was assumed that the scale was sufficient in terms of the content validity (Gozum and Aksayan 2002).

The items in the scale should be homogenous or similar to each other, and the best way for its statistical assessment is the factor analysis (Secer 2015). While doing this through the factor analysis, the main target is to determine under which sub-dimensions the scale

items will be gathered (Gozum and Aksayan 2002). The emergence of the value obtained from the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy test carried out in order to determine whether the sample group is adequate before performing the factor analysis between 0.90 and 1.00 is interpreted as perfect (Oner 2009). In this study, the KMO value was determined to be 0.94, and it can be interpreted as perfect. That Bartlett's test of sphericity is also found significant, showing that the sample size is good and the correlation matrix is suitable (Buyukozturk 2007). This value is also as requested in our study.

While the original scale is of a three-factor structure, the result of the factor analysis performed in our study items 4, 7, 9, 10, 12 and 14 slipped to different sub-dimensions. It was decided that the scale would be one-dimensional in the Turkish version since the items slipped to different factors from the original structure, and thus, the item did not match the factor name. As it was observed, the factor loads of all items in this final Turkish version of the scale were above 0.30, and the total variance was 42.70%. In this state, it was assumed that the factor loads of the items were at the sufficient level (Secer 2015). In addition to this, the fit index values of the Religious Health Fatalism Scale determined as a result of the confirmatory factor analysis were determined as follows:  $\chi^2/SD$  as 3.87, GFI as 0.98, AGFI as 0.98, CFI as 0.97, RMSEA as 0.076, and SRMR as 0.056. As a result of the relevant fit index values, it was decided that the model was acceptable in this state (with a single sub-dimension) (Capik 2014; Simsek 2007).

The internal validity coefficient was calculated separately for all three sub-dimensions in the original scale. Among the sub-dimensions, it was reported that the Cronbach's  $\alpha$  coefficient of the divine provision was 0.89 (11 items), that of the destined plan was 0.64 (4 items), and that of the helpless inevitability was 0.52 (2 items) (Franklin et al. 2008). In our study, the Cronbach's  $\alpha$  coefficient of the one-dimensional Religious Health Fatalism Scale was determined to be 0.913. Therefore, the Cronbach's  $\alpha$  coefficient is in the range of  $0.80 < \alpha < 1$ , and it can be assessed as highly reliable (Sencan 2005). The item–total correlation is regarded as another measure of internal consistency. The item–total correlation coefficient should be positive and at least 0.20 in order for an item to be acceptable (Ercan and Kan 2004). In this study, the item–total correlation of the scale varies between 0.430 and 0.713. The total score correlations are at the sufficient level for the item analysis. These findings show that the Religious Health Fatalism Scale that consists of 17 items has no problematic item in the Turkish language and it has sufficient internal consistency (Ercan and Kan 2004).

The fact that the arithmetic mean of many items in the original scale was similar to the Turkish version, however, the expression “If I become ill, God intended that to happen”, which is item 13, exhibited the biggest difference drew attention. The average of this item was higher in the Turkish version. There are also more average differences in the 4th, 9th, and 14th items than the other items. These findings once again show that there may be religious, cultural, or social differences between societies.

Certain variables affecting fatalism were examined with the database of the scale determined to be valid and reliable, and it was found that the average fatalism scores of females were higher. In a way that is similar to our study, Franklin et al. (2007) found that the fatalism score was higher in both the Caucasian and African American sample among females. The education level of female participants was generally observed low in our study, and this status may be reason of the why their fatalism levels were low. And the other reason of that may be emotional differences between women and men.

Among the other findings obtained from this study, the fact that the illiterate, those with no health insurance, housewives, and whose income does not meet their expenses have

high fatalism scores was determined many times in other studies, as well. For example, Powe (1995a, b) and Aydogdu et al. (2016) determined in their previous studies that the average fatalism score increased as the level of education decreased, Powe (1995a, b) determined a negative relationship between the level of income and fatalism. According to Freeman, the fatalistic thought is related to poverty (Freeman 1989). For example, people will earn little or will not be able to find a good job due to their low level of education. Again, considering that those who have no health insurance may generally be those people who are poor or cannot pay their insurance premiums, therefore, it is revealed in this study that poverty is associated with fatalism.

The average score of the participants with chronic disease was higher in our study. Fatalistic beliefs may show significant differences among individuals with chronic disease or in a bad health condition (Franklin et al. 2008). Individuals with chronic diseases may think that this disease has emerged since it is in their destiny, or it is given by God in return for a mistake they have made in the past. Otherwise, individuals who cannot be treated after many examinations may give up hope of human sciences and tend to asking for cure from God. All these reasons may infer that fatalism score is high among individuals suffering from chronic diseases.

The authors reported that fatalistic beliefs varied significantly by socio-demographic features according to previous studies on this topic; while developing the original scale, they assumed that the marital status and age would affect the fatalism score (Franklin et al. 2008). A positive relationship was determined between age and the fatalism score also in the study of Aydogdu et al., which supports this thought. In our study, there was a positive relationship between age and the fatalism score, and the average fatalism score of married participants was higher. The findings may point to the fact that people tend toward death and religious beliefs more as they get older. Furthermore, the age of married people may be higher than the single ones, or people may tend toward beliefs after getting married as they have more responsibilities, and this may increase their tendency to fatalistic thinking.

## Conclusion

As a result of the validity and reliability analysis conducted in this study, Religious Health Fatalism Scale proved to be a practical tool to assess fatalistic thinking among Turkish community of the given region. Nevertheless, it was deemed suitable to use the Religious Health Fatalism Scale in the Turkish Language with a single sub-dimension, rather than with three sub-dimensions as in the original scale. Answering “yes” to the items in the scale that may contradict religious beliefs may lead to the thought of opposing to religion among the participants, and they may hide their real thoughts; therefore, it is necessary to show an effort to clarify the participants who answer the scale from such thoughts, and the scale should be used in each sample after investigating its internal validity. This scale can be used to determine the fatalistic attitude about health in any subject. It was also determined in our study that the elderly, females, housewives, illiterate, individuals with no health insurance, married people, those with low income, and people with chronic diseases are more fatalist.

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## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

## Appendix

See Table 6.

**Table 6** Turkish version of Religious Health Fatalism Scale

Items	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
1	If I just pray to God about my health, He will work it out (Eğer sağlığım için yalnızca Allaha dua edersem o beni iyileştirir).				
2	When I am sick I give my burdens to God and let Him handle it (Hasta olduğum zaman dertlerimi Allaha havale ederim ve çözümünü ondan beklerim).				
3	God will take care of my health because I have found favor in his sight (Huzurunda lütfâ sahip olduğum için Allah benim sağlığımı korur).				
4	If God wants me to have better health, He will provide (Allah, daha sağlıklı olmamı isterse bunu sağlar).				
5	I don't worry about my health because it is in God's hands (Sağlığım hakkında endişelenmiyorum çünkü bu Allah'ın elinde olan bir şeydir).				
6	If I am sick, I have to wait until it is God's time for me to be healed (Hastalandığımda, Allah iyileşmemi isteyene kadar beklemek zorundayım).				
7	When I have a health problem, I pray for God's will to be done (Bir sağlık problemim olduğumda, iyileşmek için Allah'a dua ederim).				
8	As long as I stay focused in prayer, I will be healed of any sickness (İbadetlerime devam ettiğim sürece, her türlü hastalıktan korunurum).				
9	Spiritual people should accept whatever God has meant for them (Dindar insanlar Allah onlar için ne takdir ettiyse kabul etmelidir).				
10	I trust God, not man, to heal me (Bana şifa vermesi için insana değil Allah'a güvenirim).				

**Table 6** continued

Items	Strongly disagree (1)	Disagree (2)	Undecided (3)	Agree (4)	Strongly agree (5)
11 If a person has enough faith, healing will occur without doctors having to do anything (Bir insanda iman varsa, doktorlar hiçbir şey yapmasa bile şifa bulur.					
12 Sometimes, God allows people to be sick for a reason (Allah bazen insanların bir sebepten dolayı hasta olmasına izin verir).					
13 If I become ill, God intended that to happen (Eğer hasta olursam Allah'ın iradesiyle olmuştur).					
14 Whatever illnesses I will have, God has already planned it (Her hangi bir hastalığa yakalanacaksam, bunu daha önceden Allah planlamıştır).					
15 Sometimes someone can be ill because of disobedience to God (Bazen bir insan Allah'a itaat etmediği için hastalanabilir).					
16 I don't need to try to improve my health because I know it is up to God (Daha sağlıklı olmam için çabalamama gerek yok çünkü bu Allah'ın elindedir).					
17 I can control a small health issue, but only God can control a big health issue (Küçük sağlık problemlerini kendim kontrol edebilirim ama büyük olanları sadece Allah kontrol eder).					

The scores that can be obtained from the scale vary between 17 and 85. There are not reserved item. There is no inverted item, and the sum of the items gives the total score. There is no sub-dimension in Turkish version

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