



# The Relationship Between Health Fatalism and Self-Care Agency in Oncology Patients

*Onkoloji Hastalarında Sağlık Kaderciliği ile Öz Bakım Gücü Arasındaki İlişki*

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## ABSTRACT

**Aim:** The present study examined the relationship between health fatalism and the self-care agency of oncology patients.

**Material and Methods:** This is a descriptive-correlational study. The study sample consisted of 169 oncology patients who met the inclusion criteria between September 2019, February 2020, and November 2020. The study's data were collected using the Patient Information Form, Health Fatalism Scale, and Self-Care Agency Scale.

**Results:** The patients' mean health fatalism score was  $58.62 \pm 7.03$ , and the mean self-care agency score was  $87.16 \pm 15.52$ . The difference between the mean scores of health fatalism according to gender, marital status, occupation, income level, and smoking was statistically significant ( $p < 0.05$ ). The difference between the mean self-care scores according to age, education level, smoking, type of treatment, side effects of chemotherapy, and additional chronic disease status was statistically significant ( $p < 0.05$ ). A statistically significant, positive, and low-level relationship was determined between the mean scores of health fatalism and self-care agency ( $p < 0.05$ ).

**Conclusions:** Oncology patients' health fatalism attitudes were found to be high, and their self-care agency was at a moderate level. It was concluded that as the health fatalism attitudes of oncology patients increased, their self-care agency also increased. It is recommended to evaluate the impact of health fatalism as a sociocultural factor in the self-care of oncology patients.

**Key words:** nursing; cancer; self-care; health fatalism

## Introduction

As a chronic disease characterized by uncontrolled cell growth and proliferation, cancer threatens life and affects individuals as a whole with its physical, psychological, social, and economic dimensions<sup>1</sup>. Cancer

## ÖZET

**Amaç:** Bu çalışmanın amacı, onkoloji hastalarının sağlık kaderciliği ile öz bakım gücü arasındaki ilişkiyi incelemektir.

**Gereç ve Yöntem:** Bu araştırma tanımlayıcı-ilişkili arayıcı türdedir. Araştırmanın örneklemini, Eylül 2019- Şubat 2020 tarihleri arasında ve Kasım 2020 tarihinde dâhil edilme kriterlerini karşılayan 169 onkoloji hastası oluşturmaktadır. Çalışmanın verileri Hasta Bilgi Formu, Sağlık Kaderciliği Ölçeği ve Öz Bakım Gücü Ölçeği kullanılarak toplandı.

**Bulgular:** Hastaların sağlık kaderciliği puan ortalaması  $58,62 \pm 7,03$  ve öz bakım gücü puan ortalaması  $87,16 \pm 15,52$ 'dir. Cinsiyet, medeni durum, meslek, gelir düzeyi ve sigara kullanma durumuna göre sağlık kaderciliği puan ortalamaları arasındaki fark istatistiksel olarak anlamlıdır ( $p < 0,05$ ). Yaş, eğitim düzeyi, sigara kullanımı, tedavi türü, kemoterapiye bağlı yaşanan yan etki ve ek kronik hastalık durumuna göre öz bakım gücü puan ortalamaları arasındaki fark istatistiksel olarak anlamlıdır ( $p < 0,05$ ). Hastaların sağlık kaderciliği ile öz bakım gücü puan ortalamaları arasında istatistiksel olarak anlamlı, pozitif ve düşük düzeyde bir ilişki belirlendi ( $p < 0,05$ ).

**Sonuç:** Onkoloji hastalarının sağlık kaderciliği tutumlarının yüksek, öz bakım güçlerinin ise orta düzeyde olduğu bulundu. Onkoloji hastalarının sağlık kaderciliği tutumları arttıkça, öz bakım güçlerinin de arttığı sonucuna varıldı. Onkoloji hastalarının öz bakımında sosyokültürel bir faktör olarak sağlık kaderciliğinin etkisinin değerlendirilmesi önerilebilir.

**Anahtar kelimeler:** hemşirelik; kanser; öz bakım; sağlık kaderciliği

patients face many problems because of the disease process and the side effects of chemotherapy<sup>2,3</sup>. Cancer experience is a physically and emotionally traumatic process for the individual and may cause regression in self-care agency<sup>4,5</sup>. Cancer patients use self-care

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behaviors such as social support, symptom improvement, drug use, accessing information, using creative activities, and fatigue management<sup>6</sup>. In cancer patients, self-care has the potential to prevent physical and psychosocial problems caused by a cancer diagnosis and chemotherapy treatment and thus improve quality of life<sup>7</sup>. Maintaining self-care continuity is crucial in managing chemotherapy-related symptoms<sup>8</sup>.

Nurses should use cultural characteristics such as encouraging individuals to take more responsibility in self-care, coping with the disease, religious beliefs, and socioeconomic levels<sup>9</sup>. Emphasizes the influence of cultural and ethnic factors, such as values and beliefs, in an individual's decisions about prevention, health risk assessment, and treatment<sup>10</sup>. In this context, one of the concepts that affect the health behaviors and outcomes of cancer patients is health fatalism, which generally refers to the belief that health problems are beyond human reach<sup>5</sup>. Health fatalism also emerges as a sociocultural factor and as the belief that health and disease are predetermined and beyond the control of the individual<sup>10</sup>.

Cancer fatalism is the attitude that being a cancer patient is beyond one's control and the belief that death is inevitable in the presence of cancer<sup>11,12</sup>. The characteristics of fatalistic attitudes toward cancer include helplessness, pessimism, powerlessness, and the belief that almost everything causes cancer<sup>13</sup>. Patients who have a fatalistic attitude may, therefore, avoid seeking information, healthy behaviors, or cancer screening<sup>14</sup>. Previous studies reported that cancer fatalism is associated with lower participation in cancer screenings,<sup>15,16</sup> avoidance of medical care, and less adherence to cancer prevention behaviors such as exercising, not smoking, and eating fruits and vegetables<sup>17</sup>. Individuals who think that they have cancer by God's will may similarly believe that cancer is unpreventable and incurable<sup>18,19</sup>. If patients have fatalistic solid beliefs about cancer, they may want to avoid a cancer diagnosis or be reluctant to follow recommended treatments<sup>18</sup>. Fatalism may affect self-care activities because it implies that it is impossible to interfere with the destiny that existed outside the person's control long ago and that one cannot go beyond this by making an effort<sup>20</sup>.

Religious and sociocultural beliefs are essential in attitudes and behaviors toward health, diagnosis, treatment, and care<sup>21</sup>. Religious beliefs positively and negatively affect health. In a previous study conducted on patients with diabetes, a significant relationship was

detected between religious orientation and self-care<sup>22</sup>. It was found that social support and positive thinking increased as fatalism and fighting spirit increased in patients receiving chemotherapy<sup>1</sup>. On the other hand, it has been reported that health fatalism negatively affects the health behaviors of individuals and prevents their active participation in the diagnosis and treatment process<sup>23</sup>. At the same time, patients try to cope with life-threatening situations with their religious tendencies and beliefs, such as praying, especially in the presence of chronic diseases<sup>24,25</sup>. However, studies conducted on patients' spiritual or religious resources, such as fatalism in coping with chronic and critical diseases, are limited in number. The nurse needs to determine whether there is a positive impact of health fatalism in the self-care of the individual with cancer or whether fatalism is an obstacle in self-care. For this reason, the study aimed to examine the relationship between health fatalism and self-care in oncology patients.

## Research Questions

- What is the level of health fatalism of oncology patients?
- What is the self-care agency of oncology patients?
- What factors affect oncology patients' health fatalism and self-care agency?
- Is there a relationship between health fatalism and the self-care agency of oncology patients?

## Material and Methods

### *Type of Study*

The study had a descriptive-correlational design.

### *Population and Sample of Study*

The study population consisted of oncology patients receiving chemotherapy in the medical oncology clinics of a university research hospital in the east of Türkiye. The sample consisted of 169 oncology patients who met the inclusion criteria between September 2019, February 2020, and November 2020.

The Post-Hoc Power Analysis was used to determine the study's sample size adequacy. The power analysis determined that the study's power was 0.99 at a significance level of 0.05 and 95% Confidence Interval (Correlation  $H_1=0.525$ , lower critical  $r=-0.296$ , Upper Critical  $r=0.296$ , power 0.99). This value shows that the sample is sufficient.

### *Inclusion Criteria of the Study*

- Being 18 years or older
- Receiving chemotherapy treatment
- Absence of any communication problems
- The ability to understand and speak Turkish.

### *Data Collection Tools*

The study data were collected using the “Patient Information Form,” “Health Fatalism Scale,” and “Self-Care Agency Scale.”

### *The Patient Information Form*

The Patient Information Form included questions about the patients’ descriptive characteristics (age, gender, educational level, marital status, occupation, income level perception, smoking, and participation in cancer screenings) and questions about disease characteristics (duration of diagnosis, type of cancer, metastasis, treatment type, side effect of chemotherapy, way of perceiving the disease and having an additional chronic disease).

### *Health Fatalism Scale*

The “Health Fatalism Scale” was developed by Franklin, Schlundt, and Wallston<sup>26</sup> in 2008. Bobov and Çapik conducted the Turkish validity and reliability study<sup>27</sup>. The scale has a 5-point Likert design. The Turkish version of the scale has 17 items and is one-dimensional. The factor loads of the items are between 0.47–0.77, and the Cronbach Alpha Coefficient of the scale is 0.91. The scores obtained from the scale are between 17–85, and an increase in the score indicates an increased attitude toward health fatalism<sup>27</sup>. The Cronbach Alpha Coefficient was calculated as 0.83.

### *Self-Care Agency Scale*

Kearney and Fleischer developed the “Self-Care Agency Scale,” which has 43 items and determines individuals’ interest in self-care actions<sup>28</sup>. It was adapted into Turkish society by Nahcivan<sup>29</sup>. The scale has a 5-point Likert design with 35 items scored between 1–5. Items 3, 6, 9, 13, 19, 22, 26, and 31 are reverse scored. A score between 35 and 140 can be obtained from the scale. An increase in the scale score indicates an increased self-care agency<sup>29</sup>. The Cronbach Alpha Coefficient was calculated as 0.91.

### *Data Collection*

The data were collected through face-to-face interviews with the patients, in cooperation with the oncology clinic team, in a way that there was no follow-up and treatment during the appointed interview hours and that the interviews did not coincide with the patients’ meals, sleep, and visiting hours. The patients were informed about the study before the data collection. An informed consent form was presented to the patients at the time of enrollment in the study. The principle of volunteering was taken as the basis by informing that the volunteers were recruited for the study and that the patients could withdraw at any time. For the patients to respond comfortably, the data collection forms were asked of them individually by being alone with the patient, and their preferred options were marked. The data collection took approximately 15 minutes for each oncology patient.

### *Statistical Analysis*

The data analysis was made by using the IBM Statistical Package for Social Sciences (SPSS) version 22 package program. Percentages, numbers, mean, and standard deviation were used in the descriptive analysis of the data. It was found that the Health Fatalism Scale scores were not normally distributed, and the Self-Care Agency Scale scores were normally distributed. In comparing the paired groups, the T-test was used for normally distributed measurements in independent groups, and the Mann-Whitney U-test was used for non-normally distributed measurements. In comparing multiple groups, the Analysis of Variance was used for normally distributed measurements, and the Kruskal-Wallis Analysis was used for non-normally distributed measurements. The Spearman Correlation Analysis was performed to examine the inter-scale relationship. The internal validity of the scales was evaluated with the Cronbach  $\alpha$  Coefficient.

### *Ethics Principles of the Study*

The Atatürk University Faculty of Medicine Clinical Research Ethics Committee approved the study (22.04.2019:03/26), and institutional permission was obtained from the Atatürk University Research Hospital, where it was conducted.

**Results**

This section presents the study’s findings, which examined the relationship between health fatalism and self-care in oncology patients. It found that 52.1% of the patients were female, 40.8% were between the ages of 51 and 65, 36.7% were literate, and 90.5% were married. Also, 50.3% of the patients were homemakers, 73.4% had an income equal to their expenses, 82.8% did not smoke, and 94.7% did not participate in cancer screenings (Table 2).

It was also determined that 38.5% of the patients had esophageal stomach cancer, 89.9% had a diagnosis time of 0.1–4 years, 56.2% metastasized, 73.4% received only chemotherapy treatment, 53.8% had nausea and vomiting, 7.7% thought that cancer was an incurable disease, 60.4% thought that there was not much to be

done to beat cancer, and 60.4% had no other additional chronic disease (Table 3).

The mean score of the patients’ Health Fatalism Scale was  $58.62 \pm 7.03$ , and the mean Self-Care Agency Scale score was  $87.16 \pm 15.52$  (Table 1).

The mean score of health fatalism was found to be higher in males, singles, smokers, retirees, and those with less income than expenditure at a statistically significant level

**Table 1.** Health Fatalism Scale and Self-Care Agency Scale mean scores

	Min-max can be obtained	$\bar{X} \pm SD$
Health Fatalism Scale	17–75	$58.62 \pm 7.03$
Self-Care Agency Scale	44–128	$87.16 \pm 15.52$

**Table 2.** Comparison of the sociodemographic features with mean scores of Health Fatalism Scale and Self-Care Agency Scale

		n	%	Health Fatalism Scale	Self-Care Agency Scale
				$\bar{X} \pm SD$	$\bar{X} \pm SD$
Age	30–50	39	23.1	$59.28 \pm 5.70$	$92.38 \pm 15.42$
	51–65	69	40.8	$57.20 \pm 7.96$	$87.69 \pm 15.93$
	66 and above	61	36.1	$59.81 \pm 6.47$	$83.22 \pm 14.22$
	Test, p			KW: 3.299 p: 0.192	F=4.376 p: 0.014
Gender	Female	88	52.1	$57.19 \pm 8.04$	$86.11 \pm 15.08$
	Male	81	47.9	$60.18 \pm 5.36$	$88.30 \pm 15.99$
	Test, p			MWU: 2850 p: 0.024	t=-0.918 p: 0.360
Educational level	Illiterate	48	28.4	$57.79 \pm 5.53$	$82.58 \pm 14.76$
	Literate	62	36.7	$59.20 \pm 6.84$	$86.12 \pm 16.50$
	Primary-secondary	48	28.4	$58.50 \pm 8.43$	$90.58 \pm 13.98$
	High school	11	6.5	$59.54 \pm 7.78$	$98.09 \pm 12.09$
	Test, p			KW: 4.043 p: 0.257	F=4.321 p: 0.006
Marital status	Married	153	90.5	$58.30 \pm 7.24$	$87.48 \pm 15.59$
	Single	16	9.5	$61.68 \pm 3.30$	$84.12 \pm 14.97$
	Test, p			MWU: 815.5 p: 0.028	t=0.823 p: 0.412
Occupation	Housewife	85	50.3	$57.48 \pm 7.86$	$85.72 \pm 15.15$
	Self-employment	29	17.2	$60.10 \pm 4.81$	$91.41 \pm 15.96$
	Retired	38	22.5	$61.02 \pm 5.94$	$89.60 \pm 14.45$
	Employee	17	10.1	$56.47 \pm 6.52$	$81.64 \pm 17.44$
	Test, p			KW=9.046 p: 0.029	F=2.033 p: 0.111
Income level perception	Less than income	41	24.3	$60.80 \pm 6.28$	$89.12 \pm 13.24$
	Income is equivalent to expenses	124	73.4	$58.30 \pm 6.15$	$86.39 \pm 16.19$
	More than income	4	2.4	$46.25 \pm 20.36$	$91.00 \pm 17.26$
	Test, p			KW=8.041 p: 0.018	F=0.598 p: 0.551
Smoking	Yes	29	17.2	$62.37 \pm 4.88$	$92.24 \pm 10.23$
	No	140	82.8	$57.85 \pm 7.17$	$86.11 \pm 16.23$
	Test, p			MWU=1246 p: 0.001	t=2.613 p: 0.011
Participating in cancer screenings	Yes	9	5.3	$54.33 \pm 14.55$	$89.22 \pm 17.83$
	No	160	94.7	$58.86 \pm 6.36$	$87.05 \pm 15.43$
	Test, p			MWU=647.5 p: 0.611	t=-0.408 p: 0.684

( $p < 0.05$ ) (Table 2). Also, the mean score of health fatalism of the patients who disagreed with the statements “Cancer is an incurable disease” and “There is not much I can do to beat cancer” was found to be higher at a statistically significant level ( $p < 0.05$ ) (Table 3).

It was also found that the mean self-care agency score of patients aged 30–50, high school graduates, and

smokers was significantly higher ( $p < 0.05$ ) (Table 2). The difference between the mean self-care agency scores of the patients according to treatment type was statistically significant ( $p < 0.05$ ). In further analysis, the mean self-care agency score of those who received all three treatments was significantly higher than those who responded to chemotherapy, chemotreatment+radiotherapy, and

**Table 3.** Comparison of the disease characteristics with mean scores of Health Fatalism Scale and Self-Care Agency Scale

		n	%	Health Fatalism Scale	Self-Care Agency Scale
				$\bar{X} \pm SD$	$\bar{X} \pm SD$
Diagnosis time	0.1–4 years	152	89.9	58.92±6.25	86.46±15.58
	5–9 years	17	10.1	55.94±11.92	93.47±13.83
	Test, p			MWU=1221 p: 0.710	t=-1.777 p: 0.077
Cancer type	Colorectal	17	10.1	57.00±7.09	89.05±17.76
	Breast	12	7.1	55.16±6.63	82.00±12.91
	Lung	22	13.0	58.54±5.67	85.81±18.00
	Esophagus, stomach	65	38.5	60.40±5.67	89.07±15.10
	Pancreas, gall bladder, liver	20	11.8	56.80±11.61	88.10±13.10
	Hematological	6	3.6	54.66±9.15	79.16±24.86
	Genitourinary	15	8.9	57.60±4.23	86.46±11.72
	Other (unknown primary)	12	7.1	61.25±6.03	85.08±15.91
	Test, p			KW=14.09 p: 0.050	F=0.654 p: 0.710
Metastasis	Var	95	56.2	58.53±5.37	85.51±15.88
	Yok	74	43.8	58.74±8.75	89.28±14.87
	Test, p			MWU=3135 p: 0.228	t=-1.573 p: 0.118
Treatment type	Chemotherapy	124	73.4	58.96±7.38	87.70±15.49
	Chemotherapy + radiotherapy	21	12.4	57.57±5.97	79.14±17.17
	Chemotherapy + surgery	15	8.9	56.66±6.52	86.40±11.23
	All three of them	9	5.3	59.66±4.89	99.66±7.59
	Test, p			KW=2.981 p: 0.395	F=4.094 p: 0.008
Side effects of chemotherapy	Nausea-vomiting	91	53.8	59.02±5.62	89.63±14.93
	Constipation	6	3.6	56.66±2.33	76.00±11.17
	Diarrhea	10	5.9	60.30±4.90	89.10±15.77
	Abdomen pain	10	5.9	54.80±15.00	85.10±19.26
	Fatigue	32	18.9	58.93±6.45	84.50±16.27
	Dyspnea	7	4.1	55.57±6.10	71.42±9.71
	Loss of appetite	13	4.2	59.30±10.76	90.15±12.80
	Test, p			KW=6.146 p: 0.407	F=2.525 p: 0.023
Cancer is an incurable disease.	I agree	13	7.7	55.15±6.26	74.38±19.11
	I do not agree	156	92.3	58.91±7.03	88.23±14.76
	Test, p			MWU=643.5 p: 0.029	t=-3.173 p: 0.002
There is not much I can do to beat cancer.	I agree	102	60.4	57.97±5.86	83.61±16.10
	I do not agree	67	39.6	59.62±8.45	92.56±12.92
	Test, p			MWU=2679 p: 0.018	t=-2.802 p: 0.006
Additional chronic disease	Yes	67	39.6	59.04±6.37	83.11±15.46
	No	102	60.4	58.35±7.45	89.82±15.04
	Test, p			MWU=3363 p: 0.863	t=-2.802 p: 0.006

**Table 4.** The relationship between Health Fatalism Scale and Self-Care Agency Scale

		Self-Care Agency Scale
Health Fatalism Scale	r	0.274
	p	0.000

chemotherapy+surgery. On the other hand, it was determined that the self-care agency of the patients who had dyspnea and had additional chronic diseases was significantly lower ( $p < 0.05$ ). The self-care agency of the patients who disagreed with the statements “*Cancer is an incurable disease*” and “*There is not much I can do to beat cancer*” was found to be higher at a statistically significant level ( $p < 0.05$ ) (Table 3).

A statistically significant, positive, and low-level relationship was detected between the Health Fatalism Scale and the Self-Care Agency Scale mean scores ( $r = 0.274$ ,  $p < 0.01$ ) (Table 4).

## Discussion

In the present study, in which the relationship between health fatalism and self-care agency of oncology patients was investigated, it was found that the patients’ health fatalism attitudes were high. In a study conducted on breast cancer, it was reported that women who had mammography had lower health fatalism scores<sup>30</sup>. In another study conducted with individuals diagnosed with breast cancer, cancer fatalism was found to be low<sup>31</sup>. In another study, it was reported that the majority of the participants did not agree with the opinion that “*There is not much you can do to reduce your chance of having cancer.*” In contrast, more than half of them agreed with the opinion that “*When I think about cancer, I automatically think of death.*”<sup>14</sup> In another study, it was determined that most of the patients with advanced lung and bowel cancer believe that “*Cancer is curable.*”<sup>32</sup> The high health fatalism score in this study may be because of the socio-cultural characteristics of the region.

It was determined in the study that the self-care agency of oncology patients was at a moderate level. Although the mean score of self-care agency was found to be high in patients with gynecological cancer,<sup>33</sup> was found to be moderate in patients who underwent surgery for head and neck cancer<sup>34</sup>. O’Regan et al.<sup>6</sup> reported high self-care agency in patients with breast, colorectal,

Hodgkin, and non-Hodgkin lymphoma cancer patients receiving chemotherapy<sup>6</sup>. Self-care and self-efficacy scores were moderate in Chinese gastric and colorectal cancer patients<sup>35</sup>. In another study on breast cancer patients receiving chemotherapy in China, the self-care agency score was moderate<sup>36</sup>. In this study, it can be considered that the self-care agency was at a moderate level because of the chemotherapy-related symptoms, additional chronic diseases, or the majority of patients’ age was 51 and over.

As a result of this study, the mean score of health fatalism score of men was found to be significantly higher than that of women. In a literature review on cancer fatalism, it was determined that women had higher fatalism scores<sup>13</sup>. In the study of Kaya and Bozkur<sup>20</sup> and Bobov and Çapik<sup>27</sup>, fatalism tendency was higher in women. Because of the patriarchal structure of Turkish society, men may perceive the disease as an adverse condition affecting their level of competence. For this reason, it can be considered that men preferred fatalism as a coping method in this study.

In the present study, the health fatalism score of singles was found to be higher than that of married people. In the studies of Bobov and Çapik, married people had higher fatalism scores<sup>27</sup>. The reason why singles’ health fatalism score was high in this study may be that single people attributed their disease more to fate or divine intervention or that the rate of singles was low in the study.

It was determined that retirees’ mean health fatalism score was higher than homemakers and workers. In the study of Bobov and Çapik, homemakers were found to have higher fatalism scores<sup>27</sup>. In one study, it was determined that unemployed, retired, and non-working individuals had higher fatalism scores than other occupational groups<sup>23</sup>. This study suggests that retired individuals may have a fatalistic tendency to surrender after a long working period.

Health fatalism scores of patients whose income was less than their expenses were found to be higher. Studies are reporting that individuals who have low income have higher fatalism scores<sup>19,23,27,37</sup>. Michielutte et al. found that only a few patients showed a fatalistic approach in a sample with a high annual income<sup>38</sup>. On the other hand, other studies did not find a relationship between economic status and cancer fatalism<sup>25</sup>. Low-income individuals may associate their problems with a more fatalistic approach for economic reasons,

or they may turn to the health fatalism approach because of their inability to access information sources.

In this study, smokers were found to have higher health fatalism scores. One study found that smoking and being less ready to quit were associated with fatalistic beliefs<sup>39</sup>. In a study, it was reported that smokers had higher fatalism levels, and patients believed that they had cancer because they should have cancer<sup>40</sup>. In another study, it was reported that people with fatalistic beliefs about preventing cancer had reduced smoking avoidance behavior<sup>41</sup>. According to the results of this study, it can be considered that individuals with high health fatalism have a higher probability of smoking, which will negatively affect the fight against cancer.

The health fatalism score of those who agreed with the statements "*Cancer is an incurable disease*" and "*There is not much I can do to beat cancer*" was found to be significantly lower than those who did not, in the study of Duberstein et al. stated that most patients believed cancer could be cured<sup>32</sup>. In a previous study, it was reported that nearly half of the patients who had breast cancer agreed with the statement, "*I believe that it is part of God's plan for someone to have breast cancer*"<sup>31</sup>. In this study, it can be considered that those who agreed with the statement "*Cancer is an incurable disease*" and "*There is not much I can do to beat cancer*" were less likely to have health fatalism because of the knowledge that patients gained about the treatment after the cancer diagnosis or the positive effect of religious beliefs on this perception.

The self-care agency of individuals aged 30–50 was higher in the study. The self-care agency of patients who underwent surgery for head and neck cancer did not show a significant difference according to age<sup>34</sup>. No relationship between age and infection prevention self-care behaviors in hematology cancer patients was detected<sup>42</sup>. In parallel with this study, studies report that self-care agency decreases as age increases in cancer patients<sup>35,43</sup>. There might be a decrease in self-care agencies with the increase in possible health problems and the presence of more physical disabilities in advanced ages.

This study also determined that the self-care agency of high school graduate patients was significantly higher. Similar to this study, a positive correlation was reported between training and self-care agency in studies conducted on lung cancer patients,<sup>44</sup> head and neck cancer patients,<sup>34</sup> and gastric colorectal cancer patients<sup>35</sup>. Patients may search for more information about self-care skills with the increased training levels.

Individuals' self-care agency might be positively affected by increased awareness of diseases.

It was found that smokers had higher self-care agency. In a previous study, it was reported that smoking cancer patients had lower self-care agency than non-smokers<sup>43</sup>. This study suggests that patients who have high self-care agency may be less sensitive to quitting smoking after their diagnosis. Also, this study's lower number of smokers might have affected this result.

In this study, the self-care agency of patients who received chemotherapy, radiotherapy, and surgical treatment was significantly higher. In one study, a difference was found in the self-care agency of breast cancer patients who received only chemotherapy and patients who received chemotherapy+radiotherapy<sup>36</sup>. In this study, the difference in self-care agency according to the type of treatment may be due to the physical functionality of patients receiving all three treatments. It was determined in this study that dyspnea decreased the self-care agency of patients more than chemotherapy side effects such as nausea-vomiting, diarrhea, fatigue, and loss of appetite. A previous study reported that cancer patients have difficulty managing daily tasks related to chemotherapy, which affects their health-related quality of life.<sup>4</sup> Patients with dyspnea might have trouble managing their daily activities, and therefore, their self-care agency might have decreased in this study. It was also determined that additional chronic disease reduces the self-care agency of the patients. Another study found that past medical history did not affect self-care in Iranian cancer patients<sup>43</sup>. It was determined that there was no relationship between comorbidity and self-care agency in breast cancer patients<sup>36</sup> and gastric colorectal cancer patients<sup>35</sup>. In this study, the possibility of those who had other chronic diseases having more problems coping with the effects of cancer might have reduced their self-care agency.

In the present study, the self-care agency of the patients who did not agree with the statements "*Cancer is an incurable disease*" and "*There is not much I can do to beat cancer*" was found to be significantly higher than those who agreed with these statements. It can be considered that patients who believe in the curability of cancer and are aware of what they can do to beat cancer have higher self-care agency because they can be more motivated. This finding may indicate that adequate information about the treatment and care of cancer is the preliminary strategy for self-care.

It was found that as the patients' health fatalism approach increased, their self-care agency scores also increased. In a qualitative study conducted with diabetes patients, the three main themes that explained self-care were fatalism, belief in God, and fear of complications, and it was also found that these themes supported self-care<sup>45</sup>. In another study that was conducted with diabetic patients, it was found that diabetes fatalism was negatively associated with drug compliance, exercise, diet, and blood glucose tests<sup>46</sup>. A fatalistic approach can affect health-related activities positively or negatively because of its association with a spiritual force. It was determined in a study conducted with prostate cancer patients that the bond established with God is an essential factor in emotional and social functionality<sup>47</sup>. It is reported that cancer patients who rely on spiritual and religious beliefs accept their disease and try to cope with the disease positively and purposefully<sup>48</sup>. In a study conducted on women who had breast cancer, fatalism, which is one of the ways of coping with cancer, was evaluated as an active confrontation with the disease<sup>49</sup>. It was found that as fatalism increased in patients who received chemotherapy, social support and positive thinking also increased<sup>1</sup>. However, fatalism can be an adaptive response in situations such as waiting for test results related to a diagnosis<sup>1</sup>. Based on a positive point of view, fatalism is considered to increase the self-care agency of patients by reframing a stressful situation positively, providing active acceptance of the disease without submission, and because of the influence of religious beliefs.

### **Implications for Practice and Future Research**

As a result of the present study, it was concluded that as health fatalism increases in cancer patients, self-care agency also increases. As a result of this study, it can be suggested that sociocultural beliefs such as health fatalism should be evaluated as a part of care and rehabilitation. It is also recommended that the positive effect of the health fatalism approach on self-care agency should be integrated into nursing care. In addition, the negative impact of health fatalism on non-smoking health behavior should be eliminated. In the future, studies can be conducted to investigate the relationship between health fatalism and religious coping resources in increasing the self-care agency of the individual or dealing with cancer according to cancer type.

### ***Strengths and Limitations of the Study***

Fatalism and religious experiences may differ significantly between countries with different spiritual traditions. This study reveals the effects of health fatalism on self-care in Turkish culture. The study's limitations were that the data were collected in a single hospital and 169 patients, and no comparisons were made with other institutions. The limitation of this study is that it used a self-report questionnaire to assess self-care agency; the self-report questionnaire method has the disadvantage of eliciting only socially acceptable responses, and hence, it may overestimate the level of self-care agency. However, self-reported measures are simple and economical to use.

### **Conclusion**

As a result of the present study, it was found that the health fatalism attitude of cancer patients was high, and their self-care agency was at a moderate level. Health fatalism was found to be higher among men, singles, retirees, low-income participants, and smokers. According to these results, preventing the negative effect of health fatalism on health behaviors is essential. Also, those who were in the 30–50 age range, high school graduates, and smokers had high self-care agency scores, and those with respiratory distress and additional chronic diseases had low scores. Nurses need to consider the factors affecting oncology patients' self-care agency. On the other hand, it was also found that the patients who did not agree with the fatalistic statements about cancer, such as "Cancer is an incurable disease" and "There is not much I can do to beat cancer," had higher health fatalism and self-care agency scores than those who agreed with these statements. This result may show that high health fatalism does not cause fatalistic beliefs in cancer. It was found in the study that the lack of cancer fatalism provided positive support for self-care. In the study, it was concluded that as health fatalism increases in cancer patients, self-care agency also increases. The positive effect of health fatalism in increasing self-care agency is recommended to be integrated into patients' self-care.

### ***Ethical Approval***

This study was received on 22/04/2019, meeting number 3 / Decision number 26. Approval was taken from Atatürk University Faculty of Medicine Clinical Research Ethics Committee.

### Conflict of Interests

The authors declared no conflict of interest.

### Author Contributions

Concept– MŞG; Design– MŞG; Data Collection and/or Processing– MŞG, SG; Analysis and/or Interpretation– MŞG, SG; Resources– MŞG, SG; Literature Search– MŞG, SG; Supervision– MŞG; Writing Manuscript– MŞG, SG; Critical Review– MŞG.

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