



# Burnout in healthcare workers: The effect of stress of conscience

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## Abstract

**Purpose:** The stress of conscience occurs in stressful situations that are often encountered in healthcare, leading to an uncomfortable conscience in healthcare workers. They may not be able to control their emotions and feel burnout. Therefore, the aim of this study is to evaluate the effect of stress of conscience on burnout in healthcare workers.

**Methods:** This cross-sectional study was performed with 602 healthcare workers between November 2020 and January 2021 in Turkey. Data were collected using a sociodemographic form, Stress of Conscience Scale, and Maslach Burnout Inventory.

**Results:** A positive and high-level relationship was found between the stress of conscience and burnout ( $r = 0.603$ ,  $p < 0.001$ ). The stress of conscience accounted for 36% of burnout. Also, female healthcare workers have high stress of conscience and burnout scores.

**Conclusion:** This study is important in terms of realising the stress and burnout of healthcare workers and for health managers to recognise the stress types of their workers. The increase in the level of burnout of healthcare workers is associated with their stress of conscience. Using the results of this study, national and international consensus can be obtained to reduce the impact of the stress of conscience on healthcare workers.

## KEYWORDS

burnout, healthcare workers, stress of conscience

## 1 | INTRODUCTION

Healthcare workers are stuck between their patients, colleagues, managers, and the policies of institutions.<sup>1</sup> Although their job descriptions are often formally determined, some aspects of patient treatment and care cannot be controlled.<sup>2</sup> In case of rare situations, social disasters, or special situations where the stress levels are high,

instant problem-solving methods warrant stretching the limits of the formal job descriptions.<sup>3</sup> Although healthcare workers work to the best of their ability in such situations, negligence and disruptions may occur. Therefore, healthcare workers may experience the stress of conscience, which ultimately leads to burnout.

The concept of conscience is the power that pushes a person to make a judgement about his/her own behaviour and enables a person

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to make direct and spontaneous judgements on his/her own moral values.<sup>4</sup> Clauson<sup>5</sup> defined conscience as applying self-possessed knowledge and intuition, regardless of whether it is right or wrong, whereas Zucca<sup>6</sup> focuses on the emotional and motivational role of conscience. According to Zucca, our pangs of conscience activate us, prod, and provoke a reaction. Therefore, we can be proud of ourselves. Conscience acts as a bridge between emotions and facts, which play an important role in decision-making processes from belief to action.<sup>6</sup> Conscience is affected by the facts that the individual believes; these include the individual's attitude towards human rights, philosophical thoughts, psychological state, and interpersonal relations.<sup>7,8</sup> In particular, healthcare workers often encounter the pain and suffering of patients. Sometimes, they can be the determinant of the line between life and death. Although the duties and responsibilities of healthcare workers are defined by law, their conscience guides them in situations that are outside the law. They make moral choices based on the best of their knowledge, skills, and personal abilities<sup>9</sup> because their conscience warns them against possible violations of their own values. Thus, the authenticity and integrity of healthcare workers and their patients are preserved.<sup>10</sup> Conscience is a warning system for healthcare workers when their personal and professional values, beliefs, and ethical principles are under threat.<sup>11</sup>

Healthcare often involves ethically difficult situations that can disturb the conscience.<sup>12</sup> Healthcare workers may feel that they are making mistakes when in certain situations, they are unable to take appropriate actions to provide care to the patients. Such situations have a negative impact on their conscience.<sup>13</sup> In addition, healthcare workers have a feeling of remorse when they cannot provide the health care that they want to provide. In addition, when the healthcare they provide to people is not ethically appropriate, they experience stress of conscience.<sup>14</sup> Interviews with healthcare workers showed that they referred to their conscience when asked to explain the meaning of being in ethically difficult healthcare situations. Healthcare workers stated that their conscience was disturbed when they felt that they could not provide the quality of care per their beliefs. In addition, healthcare workers feel guilty and incompetent when they feel that they are falling short of the perceived performance standards in health care. This situation emerges as a feeling of guilt stemming from their conscience when the employees have to act differently from their beliefs.<sup>13</sup>

Glasberg et al.<sup>13</sup> coined the term "stress of conscience" to emphasise the existential dimension of the workplace stress of healthcare workers. The stress of conscience was conceptualised as a result of stressful situations that are often encountered in healthcare, leading to a troubled conscience in healthcare workers.<sup>12</sup> Emotional problems caused by a troubled conscience and stress cause various physical and mental health problems in individuals. One of these problems is burnout.<sup>15</sup> Healthcare workers are more likely to encounter situations such as patient burden, health problems, and a gradual increase in need for care in health institutions. Healthcare workers find themselves caught between different demands and increased pressure from society, leading to difficulties such as

prioritising healthcare services. Thus, such situations lead to the development of stress of conscience and burnout among healthcare workers.<sup>16</sup>

Burnout was first described by Freudenberg in 1974 as a condition whose symptoms and degree vary from person to person. Burnout is the long-term reaction of people to situations that trigger emotional and interpersonal relationships in the workplace. These reactions include fatigue, headache, insomnia, anger, and irritability.<sup>17</sup> Burnout is more common in healthcare workers because of the heavy workload and stressful working conditions.<sup>18,19</sup> When healthcare workers are overwhelmed because of the high workload and lack of time, they may have to lower their standards of care and treatment goals, which creates stress of conscience. Healthcare workers have difficulty in maintaining the balance between the demands of patients, colleagues and their environment, and their conscience. Those who experience the stress of conscience may not be able to control their emotions and experience exhaustion and burnout after the slightest pressure.<sup>20</sup> This can cause various physical and psychological problems.<sup>16</sup> Despite these challenges, the healthcare workers have to continue their work. Therefore, creating an awareness among the healthcare workers about the difficulties they experience and defining these problems is of prime importance. These difficulties and problems are the stress of conscience and burnout. This study aimed to evaluate the effect of stress of conscience on burnout in healthcare workers.

## 2 | MATERIALS AND METHODS

### 2.1 | Study design and participants

This cross-sectional study was performed from November 2020 to January 2021 in Turkey. All healthcare workers aged 18 years and over were invited to the study and the study was conducted with volunteers. A total of 604 people were reached using a simple random sampling method. Two questionnaires were not included in the study because they did not return the voluntary consent form. The study was completed with a total of 602 people. According to the values of the Maslach Burnout Inventory for healthcare workers, which is accepted as the main result of this study, the effect size was found to be  $f^2:1.23$  (large effect) and the power was found to be 100% in the "post hoc" power analysis conducted with the G\*Power (3.1.9.7) programme with the study results of Yağcı Özen and Yüceler.<sup>21</sup> According to these results, it was found that the number of samples in the study was sufficient.

### 2.2 | Data collection tools

#### 2.2.1 | Sociodemographic form

This form consisted of questions about age, gender, marital status, education, occupation, and work duration.



## 2.2.2 | The Stress of Conscience Scale (SCS)

The SCS developed by Glasberg et al.<sup>13</sup> was translated into Turkish by Aksoy, Mert and Çetin.<sup>22</sup> The scale includes A and B categories for each item in a 6-point Likert-type scale with nine items. The purpose of category A is to determine how often the stated situation is encountered. The items in the scale were evaluated as “Never” (0 points), “Less than once in 6 months” (1 point), “More than once in 6 months” (2 points), “Every month” (3 points), “Every week” (4 points); and “Every day” (5 points). Items in category B evaluated to what extent this situation causes stress of conscience. The items were evaluated as “No, not at all,” 0 points and “Yes, this situation creates a lot of conscience stress,” 5 points. The score for each item was obtained by multiplying the scores from categories A and B. The minimum and maximum points are obtained from each item were 0 and 25, respectively. The sum of the scores obtained from each item gives the total score of the scale. The maximum score obtained from the scale is 255. High scores on the scale indicate high stress of conscience. The Cronbach alpha coefficient of the scale was determined as 0.84.

## 2.2.3 | Maslach burnout inventory (MBI)

The MBI scale was developed by Maslach and Jackson<sup>23</sup> to measure the level of burnout experienced by people who work in the human services sector. It was adapted into Turkish by Ergin.<sup>24</sup> The scale is a 5-point Likert-type scale with 22 symptom items related to occupational burnout. The expressions “never, very rare, sometimes, often, and always” were used to evaluate the items on the scale. The scale included three subdimensions: emotional exhaustion, which describes feelings of being emotionally overwhelmed and exhausted by one's work (items 1, 2, 3, 6, 8, 13, 14, 16, 20), depersonalisation, which describes an unfeeling and impersonal response to the recipients of one's care or service (items 5, 10, 11, 15, 22), and low personal accomplishment, which describes feelings of competence and successful achievement in working with people (items 4, 7, 9, 12, 17, 18, 19, 21).<sup>23</sup> Unlike the expressions in the other subdimensions, the low personal accomplishment subdimension has positive expressions; thus, the expressions 4, 7, 9, 12, 17, 18, 19, and 21 in this subdimension were reverse coded. Values of 1.00–1.80 indicated very low burnout levels, 1.81–2.60 indicated low burnout levels, 2.61–3.40 indicated medium burnout levels, 3.41–4.20 indicated high burnout levels, and those from 4.21 to 5.00 indicated very high burnout levels. The Cronbach alpha coefficient of the scale was 0.89.

## 2.3 | Data collection

Before initiation of the study, permission was obtained from the ethics committee. An online questionnaire form was created to collect the data. The questionnaire consists of an information letter and three parts. The information letter includes information and consent

about the purpose and process of the study. The first part had six questions covering the sociodemographic characteristics of the participants. The second section contains nine items about the stress of conscience. The third part consists of 22 items on burnout. The study was performed in accordance with the Declaration of Helsinki. The participants' consent to participate in the study in a digital environment was obtained at the beginning of the survey. Participants completed the survey in 15–20 min. The answers to the following questions were examined in this study:

*Is there a significant relationship between stress of conscience and burnout?*

*Does the stress of conscience affect burnout?*

*Is there a significant difference between the outcomes of the scales and sociodemographic?*

## 2.4 | Data analysis

The data were analysed using the SPSS 21.00 software programme. Categorical variables were defined by frequency and percentages. The reliability of the scales was examined using Cronbach alpha. Since the data conformed to the normal distribution, correlation analyzes were performed using Pearson correlation coefficient. For sociodemographic variables, t-test and analysis of variance were used. Regression analysis was also performed.

## 3 | RESULTS

Of all participants, 71.1% ( $n = 428$ ) were women, 67.5% ( $n = 412$ ) were married, and 41.9% ( $n = 252$ ) were under the age of 35 years. In addition, 46.5% ( $n = 280$ ) of them had a postgraduate degree, 40.5% ( $n = 244$ ) of them were nurses, and 52.2% ( $n = 324$ ) of them had an experience of >16 years (Table 1).

The mean SCS score of the participants was  $90.27 \pm 53.74$  (min:0, max:225) and the MBI score was  $1.69 \pm 0.60$  (min:0.14, max:3.73). The scores on the various subdimensions of the MBI were  $2.39 \pm 0.93$  (min:0, max:4) for emotional exhaustion,  $1.19 \pm 0.76$  (min:0, max:3.2) for depersonalisation, and  $1.22 \pm 0.58$  (min:0, max:4) for low personal accomplishment.

A strong and positive correlation was observed between the scores of the SCS and the MBI ( $r = 0.603$ ,  $p < 0.01$ ). Additionally, a strong and positive correlation was observed between SCS and emotional exhaustion ( $r = 0.647$ ,  $p < 0.01$ ), a moderate and positive correlation was observed between SCS and depersonalisation ( $r = 0.505$ ,  $p < 0.01$ ), and a very low and positive correlation was observed between SCS and low personal accomplishment ( $r = 0.138$ ,  $p < 0.01$ ) subdimension of the MBI (Table 2). Regressions between the scales are shown in Table 3. The stress of conscience accounted for 36% of burnout. Stress of conscience had a statistically significant effect on burnout ( $p < 0.001$ ). The stress of conscience affected burnout.

The difference between the demographic characteristics of the participants and scales are shown in Table 4. A significant difference

**TABLE 1** Sociodemographic characteristics of healthcare workers.

		n	%			n	%
Gender	Female	428	71.1	Marital status	Married	412	67.5
	Male	174	28.9		Single	198	32.5
Age, years	≤25	104	17.3	Occupation	Doctor	100	16.6
	26–30	70	11.6		Nurse	244	40.5
	31–35	78	13.0		Midwife	32	5.3
	36–40	106	17.6		Technician	108	17.9
	41–45	136	22.6		Other	68	11.3
	≥46	108	17.9		Medical assistant	50	8.3
Work duration, years	≤5	112	18.6	Education	High school	26	4.3
	6–10	82	13.6		Associate degree	96	15.9
	11–15	94	15.6		Undergraduate	200	33.2
	16–20	90	15.0		Postgraduate	280	46.5
	21–25	110	18.3				
	≥26	114	18.9				

**TABLE 2** Correlations among scales.

	A	B	B1	B2	B3
The Stress of Conscience Scale (A)	1.00				
Maslach Burnout Inventory (B)	0.603*	1.00			
Emotional exhaustion (B1)	0.647*	0.899*	1.00		
Depersonalisation (B2)	0.505*	0.751*	0.579*	1.00	
Low personal accomplishment (B3)	0.138*	0.612*	0.284*	0.277*	1.00

\* $p < 0.01$ **TABLE 3** Regression analysis results by scale averages.

Variable	Non-standardised coefficient		Standardised coefficient		
	B	Std. error	Beta	t	p
Constant	1.085	0.038		28.37	0.000
Stress of conscience	0.007	0.000	0.603	18.51	0.000*

Dependent variable: Burnout

 $F = 342.812$   $p = 0.000$   $N = 602$ ,  $R = 0.603$ ,  $R^2 = 0.363$   
 Durbin Watson = 2.014
\* $p < 0.001$ 

was observed between SCS and gender ( $t = 2.874$ ,  $p < 0.01$ ). The SCS scores of women were higher than those of men. Similarly, a significant difference was found between the total and emotional exhaustion and low personal accomplishment subdimensions of MBI

and gender ( $t = 4.119$ ,  $t = 4.308$ ,  $t = 3.806$ ,  $p < 0.001$ ). The mean scores of women were higher than those of men.

A significant difference was observed between the SCS and age groups ( $F = 8.293$ ,  $p < 0.001$ ). Results of post-hoc analysis showed that the scores of the participants in the ≥46-year-old group were lower than those of participants in all other groups. In addition, a significant difference was found between the total and emotional exhaustion, depersonalisation, and low personal accomplishment subdimensions of MBI and age groups ( $F = 9.757$ ,  $F = 7.365$ ,  $F = 10.221$ ,  $F = 4.719$ ,  $p < 0.001$ ). Results of post-hoc analysis showed that the scores of participants in the ≤25-year-old group were different from those of participants in the 31–35-year-old, 41–45-year-old, and 46-year-old group scores, and participants in the ≤25-year-old group had more burnout scores. Furthermore, the burnout scores in the 26–30-year age group were higher than those in the ≥46-year age group. Similarly, the burnout scores of the 36–40-year age group were higher than those of the 41–45-year and ≥46-year age groups.

While no significant difference was observed between the SCS and education, the total and emotional exhaustion subdimension of MBI and education were significantly different ( $F = 2.941$ ,  $F = 4.723$ ,  $p < 0.01$ ). Results of post-hoc analysis showed that the high school education level was different from the associate degree and post-graduate education level.

A statistically significant difference was observed between the SCS and occupation ( $F = 5.740$ ,  $p < 0.001$ ). Results of post-hoc analysis showed that the SCS scores of the doctors were higher than those of other healthcare workers and medical assistants. The SCS scores of the nurses were higher than those of medical assistants. The SCS scores of midwives were higher than those of technicians,



TABLE 4 Relationship between demographics and scales.

	The stress of conscience scale		Maslach burnout inventory		Emotional exhaustion		Depersonalisation		Low personal accomplishment	
	$\bar{X} \pm SD$	*tp	$\bar{X} \pm SD$	*tp	$\bar{X} \pm SD$	*tp	$\bar{X} \pm SD$	*tp	$\bar{X} \pm SD$	*tp
Gender	Female	2.874	1.75 ± 0.61	4.119	2.49 ± 0.91	4.308	1.21 ± 0.76	0.885	1.26 ± 0.63	3.806
	Male	0.004*	1.53 ± 0.54	0.000**	2.14 ± 0.91	0.000**	1.15 ± 0.75	0.377	1.10 ± 0.41	0.000**
Marital status	Married	-0.158	1.69 ± 0.62	-0.131	2.38 ± 0.96	0.111	1.18 ± 0.79	0.321	1.23 ± 0.62	-0.818
	Single	0.866	1.68 ± 0.54	0.896	2.39 ± 0.86	0.911	1.20 ± 0.67	0.749	1.19 ± 0.48	0.414
	$\bar{X} \pm SD$	*Fp Post-hoc	$\bar{X} \pm SD$	*Fp Post-hoc	$\bar{X} \pm SD$	*Fp Post-hoc	$\bar{X} \pm SD$	*Fp Post-hoc	$\bar{X} \pm SD$	*Fp Post-hoc
Age	≤25 years (a)	8.293	1.95 ± 0.70	9.757	2.68 ± 0.96	7.365	1.51 ± 0.85	10.221	1.42 ± 0.76	4.719
	26–30 years (b)	0.000**	1.74 ± 0.53	0.000**	2.51 ± 0.86	0.000**	1.39 ± 0.77	0.000**	1.12 ± 0.43	0.000**
	31–35 years (c)	f < a, b, c, d, e	1.69 ± 0.50	b > f	2.40 ± 0.92	f < a, b, c, d	1.21 ± 0.67	f < a, b, c, d	1.21 ± 0.39	a > b, e
	36–40 years (d)		1.79 ± 0.53	d > e, f	2.55 ± 0.84		1.27 ± 0.76		1.27 ± 0.47	d > e
	41–45 years (e)		1.57 ± 0.61		2.30 ± 0.92		1.04 ± 0.72		1.08 ± 0.50	
	≥46 years (f)		1.45 ± 0.51		1.99 ± 0.90		0.88 ± 0.59		1.22 ± 0.72	
Education	High School (a)	2.116	1.84 ± 0.45	2.941	2.68 ± 0.73	4.7230.003*	1.23 ± 0.58	0.582	1.31 ± 0.39	1.914
	Associate Degree (b)	0.097	1.63 ± 0.72	0.033*	2.20 ± 0.99	c > b, d	1.12 ± 0.89	0.627	1.31 ± 0.78	0.126
	Undergraduate (c)		1.77 ± 0.59	a > b, d	2.55 ± 0.90		1.24 ± 0.77		1.25 ± 0.53	
	Postgraduate (d)		1.64 ± 0.55		2.32 ± 0.92		1.19 ± 0.72		1.17 ± 0.55	
Occupation	Doctor (a)	5.740	1.80 ± 0.53	10.658	2.68 ± 0.82	15.603	1.26 ± 0.71	4.829	1.15 ± 0.41	2.285
	Nurse (b)	0.000**	1.79 ± 0.60	0.000**	2.54 ± 0.96	0.000**	1.31 ± 0.78	0.000**	1.25 ± 0.65	0.045*
	Midwife (c)	a > e, f	1.98 ± 0.37	b > d, e	2.94 ± 0.57	a > d, e, f	1.21 ± 0.59	a > f	1.38 ± 0.37	f < b, c
	Technician (d)	b > e	1.56 ± 0.55	c > d, e, f	2.17 ± 0.90	b > d, e, f	1.06 ± 0.70	b > d, f	1.19 ± 0.50	
	Medical Assistant (e)	c > d, e, f	1.28 ± 0.40		1.96 ± 0.90	c > d, e, f	1.16 ± 0.89		1.31 ± 0.80	
	Other (f)		1.54 ± 0.73		1.78 ± 0.59	d > f	0.81 ± 0.60		1.04 ± 0.40	
Work duration	≤5 year (a)	5.776	1.85 ± 0.61	5.251	2.57 ± 0.96	4.294	1.53 ± 0.77	8.696	1.26 ± 0.52	3.882
	6–10 years (b)	0.000**	1.85 ± 0.63	0.000**	2.55 ± 0.85	0.001*	1.26 ± 0.78	0.000**	1.44 ± 0.73	0.002*
	11–15 years (c)	f < a, b, c, e,	1.68 ± 0.57	f < a, b, e	2.41 ± 0.95	f < a, b, e	1.16 ± 0.71	a > c, e, f	1.18 ± 0.46	b > e
	16–20 years (d)		1.65 ± 0.66		2.30 ± 1.00		1.27 ± 0.85		1.18 ± 0.50	
	20–25 years (e)		1.64 ± 0.47		2.47 ± 0.75		1.04 ± 0.67		1.08 ± 0.47	
	≥26 years (f)		1.51 ± 0.57		2.08 ± 0.96		0.94 ± 0.65		1.23 ± 0.72	

Note: t: independent sample t-test, F: one-way analysis of variance (ANOVA).

\*p &lt; 0.05; \*\*p &lt; 0.001.

medical assistants, and other healthcare workers. In addition, a significant difference was observed between the total MBI score and the scores of emotional exhaustion, depersonalisation, and low personal accomplishment subdimensions and occupation ( $F = 10.658$ ,  $F = 15.603$ ,  $F = 4.829$ ,  $F = 2.285$ ,  $p < 0.05$ ). Results of post-hoc analysis showed that the MBI scores of doctors were higher than those of technicians and medical assistants. The MBI scores of nurses and midwives were higher than those of technicians, medical assistants, and other healthcare workers.

A statistically significant difference was found between the SCS and work duration ( $F = 5.776$ ,  $p < 0.001$ ). Results of post-hoc analysis showed that the SCS scores of individuals with a work duration of  $\geq 26$  years were lesser than those with a work duration of  $\leq 5$  years, 6–10 years, 11–15 years, and 20–25 years. In addition, a statistically significant difference was found between the total scores and the scores on the emotional exhaustion, depersonalisation, and low personal accomplishment subdimensions of the MBI and work duration ( $F = 5.251$ ,  $F = 4.294$ ,  $F = 8.696$ ,  $F = 3.882$ ,  $p < 0.05$ ). Results of post-hoc analysis showed that the MBI scores of those with work duration of  $\geq 26$  years were lesser than those with a work duration of  $\leq 5$  years and 6–10 years.

## 4 | DISCUSSION

This study examined the effect of stress of conscience on burnout in healthcare workers. The majority of the participants in this study were women and nurses (Table 1). The results of this study showed the predominant characteristics of health workers and nurses in Turkey. The mean SCS score of the participants was  $90.27 \pm 53.74$  (min, 0 and max, 225) and the MBI score was  $1.69 \pm 0.60$  (min, 0.14 and max, 3.73). The scores of the MBI subdimensions were  $2.39 \pm 0.93$  for emotional exhaustion,  $1.19 \pm 0.76$  for depersonalisation, and  $1.22 \pm 0.58$  for low personal accomplishment. These results indicate that SCS scores are moderate. Lack of time for quality patient care by healthcare workers and the fact that patients do not see the value they deserve are considered as stress of conscience<sup>25</sup>; our results showed that healthcare workers participating in this study are sensitive. Moderate levels of stress may be involved in increasing the quality of patient care. However, constant exposure to stress poses a risk of burnout. Results of the burnout scale showed that although the total MBI scores were very low, scores on the emotional exhaustion subdimension were higher than the total MBI scores and scores of other subdimensions. Emotional exhaustion is described as the difficulties experienced by the employees and exhaustion of their physical and emotional resources because of lack of clarity in their roles.<sup>26</sup> In particular, healthcare workers were assigned roles and responsibilities outside of their duties. Moreover, low levels of depersonalisation and low personal accomplishment causes more harm to the patient and the system, and a high level of emotional exhaustion suggests that healthcare workers care for their patients and support the system even when they experience burnout.

A strong and positive correlation was observed between the SCS and the MBI ( $r = 0.603$ ,  $p < 0.01$ ) (Table 2), and stress of conscience

accounted for 36% of burnout (Table 3). Results of this study were consistent with those reported previously that stress of conscience in healthcare workers affects burnout. Glasberg et al.<sup>13</sup> and Jokwiro et al.<sup>27</sup> showed that the stress of conscience increases burnout in healthcare workers, and Aksoy et al.<sup>22</sup> stated that emotional problems related to the stress of conscience cause various health problems and burnout. Jokwiro et al.<sup>27</sup> reported that the stress of conscience is low in individuals with high job satisfaction. Additionally, depersonalisation with burnout increases the stress of conscience in the workplace.<sup>13</sup> Results of the study performed by Saygili, Avci and Sönmez<sup>28</sup> in nonphysician healthcare personnel showed that the level of emotional exhaustion increased with an increase in work stress. Similarly, Ülbeği, İplik and Yalcin<sup>29</sup> showed that high stress levels of the employees increase their burnout. Stressful environment and excessive workload of healthcare workers were the common features reported in all studies that were responsible for the development of stress of conscience because of being able to allocate enough time for patients, and thus resulting in increased burnout.

The results of this study showed a significant difference between the SCS and gender. Women had higher levels of stress of conscience than men (Table 4), which was similar to the results reported in the study by Glasberg, Eriksson and Norberg.<sup>30</sup> The fact that women experience more conscientious stress may be due to their cultural characteristics and hormonal structures. Similarly, the results of a study performed by Åhlin et al.,<sup>16</sup> showed that compared to men, women experienced more stress about not having the time to adequate care to the patients. Women experience more stress than men when they are unable to deliver appropriate patient care. In addition, in this study, a significant difference was found between MBI, emotional exhaustion, and low personal accomplishment subdimensions and gender. The average burnout of women was higher than that of men. The results of this study were consistent with those reported by Maslach and Jackson<sup>23</sup> in that women had more emotional exhaustion than men. However, unlike the previous studies, Bulut<sup>31</sup> reported no difference in burnout between male and female workers.

No significant difference was observed between the SCS, MBI, and marital status. Lekše et al.<sup>25</sup> reported that stress of conscience increases when there is not enough time for the family. Dinibutun<sup>32</sup> determined that emotional exhaustion was similar in singles and married physicians; however, Odonkor and Frimpong<sup>33</sup> and Duarte et al.<sup>34</sup> reported that the rate of burnout was higher in married people, which may be because of a higher ability to take responsibility for others and establish interpersonal relationships.

In this study, a significant difference was found between the SCS and age. In this study, the stress of conscience decreased with an increase in age (Table 4). Contrary to the results of this study, the results of the study by Zhang et al.<sup>35</sup> found that the stress of conscience in healthcare workers in China increased with an increase in age. The decrease in the stress of conscience with an increase in age reported in this study can be explained by the development of depersonalisation in healthcare workers over time. In addition, a significant difference was observed between the burnout level and



age in this study. The lowest level of burnout was observed in individuals  $\geq 46$  years. The results of this study were consistent with those reported by Murat et al.<sup>36</sup> in that younger worker felt inadequate about nursing care and had higher levels of stress and burnout. Cheng et al.<sup>37</sup> found a significant relationship between emotional exhaustion and age. They determined that burnout levels decrease with increasing age. The emotional exhaustion, depersonalisation, and low personal accomplishment levels of people in the  $\geq 40$ -year group were lower than those of individuals in the other age groups. These findings may be attributed to the emotional maturity of the employees as their age increases.

In this study, while no significant difference was observed between SCS and education, a statistical difference was observed between burnout scores and education (Table 4). Burnout decreased as the education level increased, which was consistent with the results reported by Odonkor and Frimpong<sup>33</sup> among healthcare professionals in Ghana. They reported that burnout decreased as the education level increased. Murat et al.<sup>36</sup> reported that the burnout level was the highest among nurses with a graduate education level, and the burnout level decreased as the education level increased. Unlike the results reported previously, results reported by Bulut showed that the level of burnout was higher in those with a high level of education.<sup>31</sup> These findings may be because workers with a high level of education had high expectations about the workplace environment. The low level of education can negatively affect the ability of individuals to cope with problems and thus cause burnout.

In this study, a significant difference was found between the SCS, MBI, and all of the subdimensions of MBI and occupation. The stress of conscience and burnout scores were highest in midwives, followed by doctors and nurses. The level of stress of conscience and burnout of other healthcare workers was lower. The high level of stress of conscience and burnout among midwives observed in this study may be attributed to their constant exposure to labour and their responsibilities in this process. Midwives may experience the stress of conscience in birth management because of malpractice cases, obstetric violence, and ethical dilemmas related to privacy.<sup>38</sup> Additionally, the high level of stress of conscience among doctors and nurses can be explained by their roles and responsibilities in patient treatment and care<sup>39</sup> explained the high stress of conscience of nurses with intensified job demands, healthcare organisational changes, higher levels of job stressors and demands, increased workload, uncertainty, and ethical dilemmas. It has been stated that this stress may cause psychological symptoms and burnout in healthcare workers. Odonkor and Frimpong<sup>33</sup> also reported that burnout levels are higher in nurses than in other healthcare workers.

A significant difference was found between the SCS and work duration in this study; the SCS decreased with an increase in the duration of work of the healthcare workers. Zhang et al.<sup>35</sup> found that as the duration of work of the doctors and nurses increased, their stress of conscience decreased. Orrung et al.<sup>40</sup> reported that healthcare professionals with a short work experience were inadequate in providing patient-centred care and were unsuccessful in stress management, resulting in physical and mental problems. The

decrease in the stress of conscience with an increase in the professional experience observed in this study may be attributed to the fact that experienced healthcare workers are more successful in patient care management. In addition, the burnout levels of the healthcare workers decreased with an increase in their work experience. The results of this study were similar to those reported by Murat et al.<sup>36</sup> and Kiliç and Ak<sup>41</sup> in that the burnout of workers decreased as their work experience increased. The decrease in burnout with increasing age can be explained by the positive effect of experience on coping with problems.

## 5 | LIMITATIONS

This study was conducted with volunteer participants in Turkey via the internet. Therefore, the results of this study cannot be generalised to other national and international healthcare workers. Moreover, since this study was conducted via the internet, a formal environment could not be created. Furthermore, since the study was performed during the pandemic, the psychological and physical fatigue of the healthcare workers could not be controlled. This fatigue may have negatively affected the results of the measurement of the stress of conscience and burnout. In addition, the answers given by the participants to the questions may have been affected by their individual, cultural, and psychological variables.

## 6 | CONCLUSIONS

These results showed that a positive and strong significant relationship was present between stress of conscience and burnout in healthcare workers. This study is important in terms of realising the stress and burnout of healthcare workers and for health managers to recognise the stress types of their workers. The increase in the level of burnout of healthcare workers is associated with their stress of conscience. Although many interventions are implemented to decrease the stress of healthcare workers and prevent their psychological distress, the level of burnout cannot be reduced. Many individual, social, and management reasons are responsible for the stress of conscience and burnout. Therefore, experimental and qualitative studies investigating the causes of the stress of conscience need to be performed in the future. Thus, views on the causes, consequences, and prevention of stress of conscience can be discussed. In addition, the results of this study may be used to obtain national and international consensus to reduce the impact of the stress of conscience on healthcare workers.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy or ethical restrictions.

## ETHICS STATEMENT

The ethical permission was obtained from the University Ethics Committee (13/11/2020;23/15).

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