Original Article

Mental Health Status of Nurses Working in Specialized Oncology Hospital: A Cross-sectional Study

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Abstract

Background: This study was conducted to determine the mental health status of nurses working in oncology units, where intense work performance was required during the COVID-19 pandemic. **Materials and Methods:** This cross-sectional study was conducted at a specialized oncology hospital and evaluated oncology nurses working in this hospital. Study data were collected using the nurse information form, Brief Symptom Inventory, Beck Depression Scale, and Compassion Fatigue Scale. **Results:** A total of 269 female (84.3%) and 50 male (15.7%) oncology nurses with a mean age of 34.14 ± 9.53 participated in our study. The depression level of the nurses was mild (10.47 ± 0.50), the level of psychological symptoms was mild (45.59 ± 1.82), and the level of compassion fatigue (51.21 ± 1.54) was moderate. A significant difference was found between participants' compassion fatigue levels according to their professional experience (P = 0.002). Oncology nurses with high depression levels had a significantly higher level of compassion fatigue (z = −8.99, P = 0.001) and psychological symptoms (z = −9.48, P = 0.001). The level of compassion fatigue was positively and significantly related to both the level of depression (r = 0.679, P < 0.01) and the level of psychological symptoms (r = 0.751, P < 0.01). **Conclusions:** Nurses in oncology setting may not have optimal psychological well-being, and may be vulnerable to depression, compassion fatigue, and anxiety. Such mental health issues may lead to poor health-care-related outcomes, leading to negative consequences financially for both individuals and the organization.

Keywords: Compassion fatigue, depression, nurses' vulnerability, oncology nurses

Introduction

Nurses may achieve high levels of satisfaction while providing high-quality, person-centered care to patients with potentially life-threatening illnesses, such as cancer, cardiovascular diseases or other serious illnesses, and their families.[1] The main task of oncology nurses, whether through short-term or long-term follow-up, is to promote self-management and quality of life among patients at all stages of the disease.[2] For this reason, the counseling skills of nurses working in oncology units and their ability to establish and maintain interpersonal relationships are of great importance for patients' quality of life, well-being, recovery, and psychosocial functionality.

In oncology units, nurses deal with people diagnosed with cancer, which evokes a lot of fear and uncertainty.[3] Oncology nurses are often the "first responders" to a patient's or family member's expressions of seeking spirituality, struggle, gratitude, and joy.[4] Oncology nurses provide health care to patients according to certain characteristics. During the illness, oncology patients often experience psychological problems, anxiety, fear, and depression. This situation is associated with increased stress in nurses.[5] However, oncology nurses have to deal with ethically complex clinical decision-making situations, the complexity of cancer treatments, grief, bad news communication, and the death of patients.[6] For these reasons, it is expected that the mental health problems of oncology nurses will differ from those of the nurses in other units.

Health professionals' mental health can be adversely affected by heavy workload, length of shifts, insufficient staff, shift work, professional conflicts, complaints and demands of patients,

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and imbalance between work and private life.[3,7] Some studies found that in nurses working in oncology units' mental health status was affected by burnout, age, marital status, professional experience, workload, shift, support status at work, need for approval, responsibility, and compassion fatigue.[8,9] These factors can negatively affect the physical health, home life, work, and relationships of nurses working in oncology units, causing them to experience irritability, insomnia, and fatigue.[10] These negative health outcomes of caregivers may result in lower quality of care and patient satisfaction.[11] The long-term psychological effects of increased stress on health-care professionals are difficult to predict, and therefore, continuous monitoring is recommended.[12]

Another factor affecting the mental state of health-care workers in recent years is the COVID-19 pandemic.[13] The COVID-19 pandemic is described as a period when many communities worldwide are unprepared for the unexpected upheaval, and nurses are hailed as heroes. According to the available literature, changes in mental health due to COVID-19 vary by profession and country.[14,15] Some studies reported that the mental health of the oncology unit employees was greatly affected during the pandemic, and they experienced anger, irritability, depression, posttraumatic stress symptoms, burnout, and sleep disorders.[12,16-19] Those working in oncology units were generally more inclined to experience burnout.[20] They may even be at higher risk following a crisis such as COVID-19. Since the beginning of the pandemic, individuals with cancer have been among those at highest risk for significant complications of COVID-19. The transfer of nursing care practices to oncology nursing practice for a highly contagious virus about which new information is constantly emerging has made it difficult to achieve clinical competence.[21] This study was conducted to determine the mental health status of nurses working in oncology units, where intense work performance was shown during the pandemic.

Materials and Methods

Study design

This study was conducted with a descriptive correlation design to investigate the mental states of nurses working in a group of oncology units in a specialized cancer center.

Sample and data collection

This study was conducted between August and December 2022 in a specialized oncology hospital in Turkey. Patients are provided with inpatient and outpatient care services through medical oncology, radiation oncology, basic oncology, bone marrow transplantation unit, ıntensive care unit, apheresis unit, outpatient treatment unit, radiology, nuclear medicine, nutrition and diet, and relevant specialized laboratories at specialized oncology hospitals. The bed capacity was 600. Approximately 1200 patients are provided inpatient and outpatient care services through oncology hospitals. There was no change in the hospital's patient load during the pandemic. Health services continued uninterruptedly according to the protocols set by the World Health Organization and the Turkish Ministry of Health. In the oncology hospital, nurses work a total of 40 h per week. Nurses work both day shifts and night shifts. Nurses' working hours increase due to illness and maternity leave. The study population consists of oncology nurses (n = 480) working in this hospital. A specific sample calculation program was used to determine the study sample, and the estimated sample size was found to be 214 (alpha = 0.05, confidence interval = 95% (45%–55%). A total of 319 oncology nurses participated in the study. The power of the retrospectively calculated study was found to be 100.0%. (Type-1 error = 0.05, d = 0.70), (G*Power 3.1.9.2 package program, Heinrich-Heine-Universität Düsseldorf, Düsseldorf).[22]

The inclusion criteria were as follows: being 18 years of age or older, oncology nurses regularly involved with the follow-up of oncology patients, and volunteering to participate in the study. The exclusion criteria were participants who gave incomplete responses to the scales used in the study and suffering from severe physical or mental illness.

Study instruments

Study data were collected using the nurse information form, Brief Symptom Inventory (BSI), Beck Depression Scale (BDS), and Compassion Fatigue Scale (CFS). These forms were transformed into applicable forms online by the researchers through "forms created on the online platform" and sent to the participants from social media groups (Whats App).

The informed consent form was attached to the first page of the online forms, and the participants were informed that they "have the right not to participate in the study or to withdraw from the study at any time after participation." Before starting the data collection process, the researchers checked the applicability of the online questionnaire. When sharing the link to the forms, the "edit answer" and "limit to 1 answer" features were set on the system. To prevent data loss, filling in only one option for each question was required.

Nurse information form: This form, which was created by reviewing the literature, includes questions about age, marital status, education level, professional experience, and years of experience in oncology clinics.

BSI: The BSI, developed by Derogatis, is a 5-point Likert-type scale measuring the presence of psychological symptoms. The scale consists of five subdimensions and 53 items scored between 0 and 4 points. As a result of the factor analysis, five factors were obtained: anxiety, depression, negative self, somatization, and anger/aggression. The lowest and highest scores that can be obtained from the scale are 0 and 212, respectively. High scores indicate an increase in psychological discomfort in that subdimension. The reliability coefficients in the original study of the scale ranged from 0.71 to 85 in the factors and were found to be 0.95 in the Turkish adaptation[23] and 0.97 in this study.

BDS: The 21-item scale was developed by Beck *et al*. to determine the risk for depression and to measure the severity of

symptoms of depression. The lowest score for each question is 0, and the highest score is 3. A total of 0–9 points indicate normal, 10–16 points mild, 17–29 points moderate, and 30–63 points severe symptoms. The cutoff score of the Beck Depression Inventory was 17, and those with a score above this score were considered to have symptoms of depression.[24] In this study, the Cronbach's alpha coefficient was found to be 0.91.

CFS: Compassion Fatigue-Short Scale was developed by Adams *et al*. The scale was found to be a valid and reliable measurement tool in evaluating compassion fatigue.[25] The scale is a self-report assessment tool that asks participants to indicate to what extent each item reflects their experience. It is a 10-point Likert-type scale ranging from rarely/never (1) to very often (10). The scale consists of two subdimensions: secondary trauma and occupational burnout. The items "c, e, h, j, and l" refer to secondary trauma, while the items "a, b, d, f, g, i, k, and m" measure occupational burnout. Cronbach's alpha coefficients of the subdimensions range from 0.80 to 0.90 and show sufficient internal reliability. No scoring algorithm or cutoff point is specified for the scale. The lowest and highest scores to be obtained are 13 and 130, respectively. The higher the score, the higher the level of compassion fatigue.[26] In this study, Cronbach's alpha coefficient was found to be 0.94.

Data analysis

IBM SPSS Statistics 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY, USA: IBM Corp.) program was used for statistical analysis and calculations. The statistical significance level was accepted as $P < 0.05$. The Shapiro–Wilk test was used to determine whether the study data met the parametric test assumptions. From statistical methods, descriptive statistics (number, percentage, frequency, median, mean, and standard deviation), correlation test, Kruskal–Wallis *H*, and Mann–Whitney *U*-test were used.

Ethical considerations

The ethics committee approval required for the study was obtained from a hospital's noninterventional clinical research ethics committee (Date: 26.05.2022, No: 2022-05/107). All participants read and approved the online informed consent form.

Results

A total of 269 female (84.3%) and 50 male (15.7%) oncology nurses with a mean age of 34.14 ± 9.53 (from 22 to 59) participated in our study. About 57.4% of the nurses are married, and 47.6% have children. About 81.5% have undergraduate education, 38.9% have 1–9 years of professional experience, and 45.5% have 1–9 years of oncology nursing experience. About 58.6% work both day and night shifts. About 23.2% have a chronic disease. About 24.8% use regular medication for treatment. The rate of smoking or alcohol use among nurses was 35.6% [Table 1].

Table 1: Sociodemographic characteristics of the participants (*N*=319)

Variable	*n* (%)
Marital status	
Unmarried	136 (42.6)
Married	183 (57.4)
Having children	
Yes	152 (47.6)
No	167 (52.4)
Education level	
Senior high school	11 (3.4)
Associate degree graduate	27 (8.5)
Bachelor degree	260 (81.5)
Graduate education	21 (6.6)
Years in nursing profession (years)	
<1	40 (12.5)
1–9	124 (38.9)
10–19	64 (20.1)
>20	91 (28.5)
Years of experiences in oncology department (years)	
<1	71 (22.3)
1–9	145 (45.5)
10–19	80 (25.1)
>20	23 (7.2)
Monthly workload (h)	
Day shift only (08.00–16.00)	90 (28.2)
Night shift only (16.00–08.00)	42 (13.2)
Both day shift and night shift	187 (58.6)
Smoking or drinking alcohol	
Yes	114 (35.7)
No	205 (64.3)
Having a chronic illness	
Yes	74 (23.2)
No	245 (76.8)
Having a mental illness	
Yes	15 (4.7)
No	304 (95.3)
Using medication for treatment	
Yes	79 (24.8)
No	240 (75.2)

The score levels of the scales of compassion fatigue, depression, and the level of psychological symptoms used to determine the mental states of oncology nurses are presented in Table 2. The depression level of the nurses was mild (10.47 ± 0.50), the level of psychological symptoms was mild (45.59 ± 1.82), and the level of compassion fatigue (51.21 ± 1.54) was moderate.

The level of compassion fatigue, depression, and psychological symptoms of oncology nurses was investigated by various sociodemographic variables [Table 3]. The levels of compassion fatigue, depression, and psychological symptoms of oncology nurses were found to be similar according to variables, such as marital status, having a child, smoking/alcohol use, chronic disease status, and educational background ($P > 0.05$).

A significant difference was found between participants' compassion fatigue levels according to their professional experience ($P < 0.05$). Compassion fatigue levels were found

Table 2: Distribution of the scores of the participants from the scales (*N*=319)

Scale and subscale	Mean±SD	Minimum–maximum
CFS	51.21±1.54	13.00–122.00
Secondary traumatic stress	19.72±11.54	5.00–50.00
Burnout	31.47±17.31	8.00–72.00
BDS	10.47±0.50	0.00–40.00
0–9 point	3.88±3.06	0.00–9.00
10–16 point	12.65±1.94	10.00–16.00
17–29 point	21.84±3.82	17.00–29.00
30–63 point	33.88±3.46	30.00–40.00
BSI	45.59±1.82	0.00–165.00
Anxiety	9.81±8.23	0.00–44.00
Depression	13.13±9.07	0.00–44.00
Negative self	9.92±8.14	0.00–42.00
Somatization	6.35±5.18	0.00–26.00
Hostility	6.57±4.71	0.00–22.00

SD: Standard deviation, CFS: Compassion Fatigue Scale, BDS: Beck Depression Scale, BSI: Brief Symptom Inventory

to be significantly higher among nurses with professional experience of 1–9 years ($\chi^2 = 14.61$, df = 3, $P = 0.001$). On the other hand, participants' levels of depression and psychological symptoms were similar according to their professional experience ($P > 0.05$). However, a significant difference was found between their compassion fatigue levels according to the experience gained from oncology clinics ($P < 0.05$), but the levels of depression and psychological symptoms were similar ($P > 0.05$). Compassion fatigue levels were found to be significantly higher among nurses working in oncology clinics for 1–9 years ($\chi^2 = 10.69$, df = 3, $P = 0.019$). Compassion fatigue and depression levels were higher ($P < 0.05$) and the level of psychological symptoms was similar ($P > 0.05$) according to their shift work. Nurses who work only in shifts (16 h and 24 h) have higher compassion fatigue ($\chi^2 = 8.94$, df = 2, $P = 0.033$). Depression scores of 19.4% ($n = 62$) of the nurses were found to be above the cutoff point. Oncology nurses with high depression levels had a significantly higher level of compassion fatigue ($z = -8.99$, $P = 0.001$) and psychological symptoms ($z = -9.48$, $P = 0.001$), [Table 3].

When the results presented in Table 4 were examined, it was found that the level of compassion fatigue was positively and significantly related to both the level of depression ($r = 0.679$, $P < 0.01$) and the level of psychological symptoms ($r = 0.751$, $P < 0.01$).

Discussion

This study investigated the mental states of nurses working in a group of oncology units in a specialized cancer center in Turkey. The results of the study showed that oncology nurses with high levels of depression had higher levels of compassion fatigue and psychological symptoms. However, compassion fatigue was found to be positively related to the level of depression and psychological symptoms. It has been concluded that oncology nurses' professional experience and work night shifts are the factors affecting the level of compassion fatigue and depression. Our study results are similar to those of studies conducted before and during the pandemic.[9,16,27-29]

Patients receiving treatment in oncology units generally experience various chronic health problems, which leads to health-care professionals experiencing patient deaths frequently. As a result, the compassion fatigue levels of oncology nurses who experience high levels of emotional stress may increase.[27,30] Studies have shown that nurses who are sympathetic and sensitive and spend more time with patients have higher risks spend more time with patients who have higher risk of compassion fatigue.[31] Although previous research has reported different results, demographic variables such as age, professional experience, work-related stress, and educational background were found to be factors that affect compassion fatigue and satisfaction.[32,33] In the study of Zhang *et al*., nurses who worked in the oncology unit for 10 years or more had a higher level of compassion satisfaction and a lower level of burnout.[29] The average professional experience of oncology nurses who participated in the study of Phillips *et al*. was 11.57 ± 10.00 years. The duration of experience of oncology nurses was positively and significantly related to compassion satisfaction and was not associated with compassion fatigue, burnout, or depression.[28] In the study of Wu *et al*., it was concluded that nurses with more experience were at lower risk of compassion fatigue than their less experienced colleagues.[9] Professional experience gives nurses the ability to overcome difficult situations over time. Experienced nurses, with their expertise and skills, are more willing to better understand the course of the disease, accept death, and provide care and support to patients.[34]

Due to prolonged exposure to challenging work environments and often witnessing patients' suffering, health professionals working in oncology units are more likely to experience depression and anxiety.[29,35] Beliefs that experiencing and expressing negative emotions are unacceptable are associated with greater emotional avoidance and less self-compassion.[35] Compassion fatigue can seriously affect nurses' physical, psychological, and mental health. Studies have found that compassion fatigue is associated with insomnia, fatigue, depression, lower job satisfaction, loss of hope, malnutrition, and poor reasoning.[36-38] However, a high level of compassion fatigue may decrease the quality of patient care, increase the cost of care services, and have a negative impact on patient–nurse communication.[38-40] Compassion fatigue levels show a significant positive correlation with depression, anxiety, and sleep disturbance. Subjects in the at-risk and very distressed group for the compassion fatigue profile had significantly higher levels of depression, anxiety, and sleep disturbances.[41] According to the results of the study, compassion fatigue is a predictive factor for the mental health of oncology nurses. Based on the findings of this study, depression and psychological symptoms are associated with compassion fatigue. In the study of Phillips *et al*., depression was found

Table 3: Distribution of Compassion Fatigue Scale, Beck Depression Scale, and Brief Symptom Inventory according to certain variables (*N*=319)

Variable	CFS, median (Q1–Q3)	BDS, median (Q1–Q3)	BSI, median (Q1–Q3)
Marital status			
Unmarried	46.00 (26.25−72.75)	8.00 (3.00−15.00)	40.00 (21.25−66.00)
Married	49.00 (28.00−70.00)	10.00 (4.00−14.00)	40.00 (19.00−68.00)
Test result* (*Z*; *P*)	−0.122; 0.903	−1.243; 0.214	−0.039; 0.969
Having children			
Yes	48.00 (27.00−68.75)	9.00 (3.00−15.00)	43.00 (21.00−69.75)
No	47.00 (28.00−72.00)	8.00 (3.00−15.00)	37.00 (19.00−64.00)
Test result* (*Z*; *P*)	0.197; 0.844	−0.441; 0.659	−0.996; 0.319
Smoking/drinking alcohol			
Yes	48.00 (25.00−69.25)	11.00 (4.00−15.00)	43.00 (21.75−70.25)
No	48.00 (28.00−72.50)	8.00 (3.00−15.00)	39.00 (19.00−64.00)
Test result* (χ^2; *P*)	−0.694; 0.488	−1.343; 0.179	−1.157; 0.247
Having a chronic illness			
Yes	52.50 (33.50−74.25)	11.00 (5.00−15.00)	42.00 (21.75−68.25)
No	47.00 (26.00−69.50)	8.00 (3.00−15.00)	39.00 (19.00−66.50)
Test result* (χ^2; *P*)	−1.508; 0.132	−1.890; 0.059	−0.946; 0.344
Education level			
Senior high school	49.00 (20.00−76.00)	11.00 (4.00−25.00)	39.00 (24.00−78.00)
Associate degree graduate	38.00 (25.00−80.00)	9.00 (4.00−15.00)	39.00 (17.00−66.00)
Bachelor degree	48.00 (27.25−70.00)	9.00 (3.00−14.75)	40.00 (21.00−66.75)
Graduate education	56.00 (31.50−71.50)	8.00 (2.00−14.50)	43.00 (17.50−61.50)
Test result* (χ^2; *P*)	−1.508; 0.132	−1.890; 0.059	−0.946; 0.344
Years in nursing profession (years)			
<1	46.50 (23.25−83.50)	11.00 (2.00−14.75)	43.50 (11.25−85.75)
1-9	53.50 (35.25−79.75)	11.00 (4.00−17.00)	46.50 (23.50−73.00)
10-19	50.50 (27.25−68.00)	8.50 (3.00−14.00)	40.00 (20.00−63.75)
> 20	39.00 (24.00−57.00)	7.00 (3.00−13.00)	33.00 (19.00−54.00)
Test result** (χ^2; *P*)	14.61; 0.002	6.23; 0.101	6.60; 0.085
Years of experiences in oncology department (years)			
<1	54.00 (23.00−79.00)	10.00 (3.00−15.00)	41.00 (19.00−80.00)
1–9	50.00 (32.00−78.00)	10.00 (3.50−16.00)	43.00 (23.00−66.00)
10–19	49.00 (25.25−64.75)	7.00 (3.00−12.75)	35.50 (17.25−61.75)
>20	33.00 (21.00−48.00)	5.00 (2.00−9.00)	34.00 (21.00−47.00)
Test result** (χ^2; *P*)	10.69; 0.014	5.97: 0.113	3.52; 0.317
Monthly workload			
Day shift only	45.50 (24.75−65.00)	7.00 (2.00−14.00)	35.50 (19.00−60.00)
Night shift only	33.50 (16.75−65.50)	7.50 (2.00−13.00)	33.00 (18.50−66.00)
Both day shift and night shift	51.00 (32.00−76.00)	10.00 (4.00−16.00)	44.00 (21.00−74.00)
Test result** (χ^2; *P*)	8.94; 0.011	6.76; 0.034	5.49; 0.06
BDS			
<17 (cutoff score)	40.00 (24.50−60.00)	7.00 (2.00−11.00)	33.00 (17.00−51.00)
>17 (cutoff score)	86.50 (66.00−100.25)	25.00 (19.00−30.25)	86.00 (66.00−102.50)
Test result* (*Z*; *P*)	8.99; 0.001	12.240; 0.001	−9.48; 0.001

*Between-group comparison by using Mann–Whitney test, **Between-group comparison by using Kruskal–Wallis H. Statistical significance set at $P<0.05$. CFS: Compassion Fatigue Scale; BDS: Beck Depression Scale; BSI: Brief Symptom Inventory

to be a factor that increases the risk of compassion fatigue in oncology nurses.[28] In the study of Hegney *et al*., compassion fatigue was found to be associated with anxiety and depression, and nurses with high compassion fatigue levels were found to have higher depression levels.[42] In the study of Zhang *et al*., burnout and compassion fatigue levels of oncology nurses who used ineffective coping methods and blamed themselves were found to be high.[29] In the study of Jarrad and Hammad, it was found that oncology nurses had high levels of burnout and compassion fatigue.[43] The results of the study reveal that oncology nurses are a risky group in terms of negative mental health. Considering the working conditions of oncology nurses and the characteristics of the patients they care for, waiting for their mental health to impair can have very costly consequences both organizationally and personally coping skills, and characteristics of the patients they care for. In this

Table 4: Correlations among study variables (*N*=319)

Scale and subscale	BDS	CFS subscale		CFS	BSI subscale					BSI
		SS	Burnout		Anxiety	Depression	NS	Somatization	Hostility	
BDS	-	0.565**	0.701**	0.679**	−0.005	−0.002	0.015	−0.011	−0.013	0.751**
CFS	0.679**	0.930**	0.976**	-	−0.060	−0.035	−0.048	−0.033	−0.058	0.704**
SS	0.565**	-	0.831**	0.930**	−0.079	−0.056	−0.067	−0.047	−0.046	0.626**
Burnout	0.701**	0.831**	-	0.976**	−0.048	−0.023	−0.039	−0.022	−0.064	0.701**
BSI	0.751**	0.626**	0.701**	0.704**	−0.051	−0.027	−0.028	−0.042	−0.066	-
Anxiety	−0.005	−0.079	−0.048	−0.060	-	0.883**	0.901**	0.791**	0.787**	−0.051
Depression	−0.002	−0.056	−0.023	−0.035	0.883**	-	0.878**	0.796**	0.774**	−0.027
NF	0.015	−0.067	−0.039	−0.048	0.901**	0.878**	-	0.733**	0.799**	−0.028
Somatization	−0.011	−0.047	−0.022	−0.033	0.791**	0.796**	0.733**	-	0.699**	−0.042
Hostility	−0.013	−0.046	−0.064	−0.058	0.787**	0.774**	0.799**	0.699**	-	−0.066

**Correlation is significant at the 0.01 level (two-tailed). BDS: Beck Depression Scale, CFS: Compassion Fatigue Scale, SS: Secondary traumatic stress, BSI: Brief Symptom Inventory, NF: Negative self

context, developing health strategies to protect and treat nurses' mental health in oncology care settings is important.

Conclusions

At the time of the study, Turkey was in the normalization phase after the COVID-19 pandemic, so oncology nurses were still struggling with the pandemic. With the endemic nature of the pandemic, the number of patients, the risk of infection, the lack of personal protective equipment, and the deaths of patients and coworkers were among the causes of psychological impact for nurses.[44] Extraordinary situations such as pandemics, insufficient number of nurses, working conditions, chronic diseases that nurses have, ineffective coping methods can negatively affect the mental health of the individual. However, health professionals have been able to adapt to personal and professional challenges thanks to their resilience.[45] Compassion fatigue is a complex and multidimensional concept. Emotions correspond to one of these elements. Increasing oncology nurses' self-awareness of emotions may be beneficial to combat compassion fatigue. In addition, it is recommended that health institutions improve oncology nurses' working conditions, reward them, and provide services, such as consultation and liaison psychiatry, to protect the mental health of health professionals and, thus, increase the quality of care services. Given that preventive psychological skills can be taught, health-care organizations should be responsible for teaching stress management, self-care, and resilience-building approaches within the adult oncology nursing workforce.

Limitations

This study was conducted to determine the mental status of oncology nurses. One of the limitations is that the sample was selected from a single center. In addition, statistical analyses were limited by the single sample group and there were no control and comparison groups in the study. Therefore, they cannot be generalized. Future studies are recommended to work with a larger sample of oncology nurses from different health institutions. A larger sample may enable the identification of various other factors affecting the mental health of oncology nurses.

Data availability statement

Data supporting the results reported in a published article can be found.

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Conflicts of interest

There are no conflicts of interest.

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