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Turkish nurses' burnout levels, job satisfaction, and mental symptoms during the COVID-19 pandemic

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Abstract

Background: Nurses involved in healthcare delivery during the Coronavirus disease 2019 (COVID-19) pandemic experience higher levels of burnout, job satisfaction, and mental symptoms than other healthcare professionals did.

Objectives: This study examined nurses' burnout level, job satisfaction, and mental symptoms during the COVID-19 pandemic.

Methods: A descriptive, correlational study was conducted on 262 nurses working at a foundation university hospital in Istanbul between July and December 2021. The data were collected by using the Nurse Information Form, Maslach Burnout Inventory, Minnesota Job Satisfaction Scale, and Mental Symptom Checklist. Data analysis was performed using the Mann-Whitney U test, Kruskal-Wallis H test, Spearman correlation, and Bonferroni post hoc test.

Results: Nurses' Burnout, Job Satisfaction, and Mental Symptom average scores were 70.36±11.00, 2.80±0.49, and 1.20±0.79, respectively. A statistically significant negative and weak relationship was found between burnout, and job satisfaction average scores (r=-0.380; P<0.001). Age, marital status, and income level were associated with burnout, job satisfaction, and mental symptoms (P<0.05).

Conclusion: Nurses had a moderate level of burnout, a low level of job satisfaction, and a high level of mental symptoms.

Keywords: COVID-19, Burnout, Job satisfaction, Mental symptoms, Nurses.

Introduction

Burnout can reduce job performance, and increase physical and mental health problems such as depressive affection, restlessness, and concentration impairment, which will lead to absenteeism, job dissatisfaction, and job leave. [1-3]

Changes in healthcare settings during the Coronavirus disease 2019 (COVID-19) pandemic to maintain their dynamicity and efficiency may also cause varying levels of depression, anxiety, and stress for healthcare providers, particularly nurses. [2-6] Nurses' feelings of job satisfaction, mental symptoms, and burnout profoundly impact the quality of nursing care. [7] COVID-19, due to its unknown nature and high contagiousness, can cause high levels of stress, mental symptoms and tension, and, finally, burnout in nurses, affecting their job satisfaction. Several studies investigated burnout, job satisfaction, or mental symptoms in nurses. [3,7-9] However, studies that evaluated these variables together in Turkish nurses during the COVID-19 pandemic are not available. Therefore, the question that arises is whether there is a relationship between job burnout, job satisfaction, and depression in Turkish nurses.

Objectives

This study examined the burnout level, job satisfaction, and mental symptoms of Turkish nurses during the COVID-19 pandemic.

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Methods

Study design and participants

A cross-sectional study was conducted between July and December 2021. A total of 390 nurses working in the internal and surgical and adult inpatient services of a foundation university hospital in Istanbul, Turkey, constituted the population of the study. As a result of the power analysis using the G*Power 3.0.10 program; with 0.90 power, 0.5 margins of error, and d=0.202 effect size, a total of at least 262 samples were found to be sufficient. The inclusion criteria included the active working of nurses in internal, surgical, and adult inpatient services.

Data collection instruments

The Nurse Information Form consisted of questions to determine the socio-demographic characteristics of nurses.

Maslach Burnout Inventory (MBI)[10] measures the burnout status of individuals working in different occupational groups. Its Turkish translation [11] consists of 22 items under three dimensions: Emotional Exhaustion (EE), Depersonalization (DP), and Feeling of Personal Accomplishment (PA). The items are rated on a seven-point Likert-type scale ranging between 0 and 6. The increase in EE and DP scores indicates a high level of burnout, and the increase in the PA score indicates a low level of burnout. Ergin found Cronbach-α coefficients for the three dimensions as 0.83 for Emotional Exhaustion, 0.65 for Depersonalization, and 0.72 for Personal Accomplishment.[11] In this study, the Cronbach-α coefficient was found to be 0.722.

Minnesota Job Satisfaction Scale (MJSS) [12] measures job satisfaction. The MJSS without reverse questions consists of 20 items and has features that determine the internal, external, and general satisfaction levels. General Satisfaction covers all items of the scale. Items are rated on a five-point Likert type scale between 1 and 5. The Cronbach-α coefficient was reported 0.91.[13] In this study, the Cronbach-α coefficient was found to be 0.821.

The Mental Symptom Checklist (SCL-90-R) is a psychiatric checklist tool used in determining the psychiatric symptoms, and the level of challenge or stress experienced by individuals.[14] The Turkish validity and reliability study of the scale was conducted by Dağ.[15] It contains 90 self-reported items and each item is scored between 0 and 4. The increase in the General Symptom Level, which is the general average score of the scale, indicates the increase in the distress of the individual's psychiatric symptoms and is the highest index receivable from the scale. While a score greater than 1 indicates a mental problem, a score between 0.5 and 1 indicates a moderate problem, and a score less than 0.5 indicates that there is no problem. Three general scores can be calculated from the scale. In the original study of the scale, the Cronbach-α coefficient was 0.97. [16] In this study, the Cronbach-α coefficient was found to be 0.97.

Data collection

The data were collected from nurses recruited to the study by convenience sampling and by visiting hospital units three days a week between 08:00 and 16:00. Nurse Information Form, Minnesota Job Satisfaction Scale, and Mental Symptom Checklist were applied to each nurse. It took approximately 10-15 minutes to collect data from each nurse.

Ethical considerations

Before starting the study, permission was obtained from the researchers who developed the scale to use the scales. The study was approved by the Ministry of Health General Directorate of Health Services (approval code: T16_54_25, issued at 202-05-17), institutional permission from a foundation university hospital and ethical approval from the clinical research ethics committee (approval code: 8725) were obtained. The researcher explained to the nurses the purpose, content, and what was expected from them. The principles of the Declaration of Helsinki were followed in the conduct of the study.

Data analysis

IBM SPSS Statistics 24 (IBM SPSS, Turkey) was used for statistical analysis. Non-parametric methods were used for the measurement values that did not conform the normal distribution. The Mann-Whitney U test was used for the comparison of measurement values of two independent groups, and the Kruskal-Wallis H test was used for the comparison of measurement values of three or more independent groups. The Bonferroni correction was applied for binary comparisons of the variables that differed significantly for three or more groups. The Spearman correlation coefficient examined the relationship between measurement values without normal distribution. P values <0.05 were considered significant.

Results

The mean age of the nurses was 26.11±6.55 years, 79.4% of them were female, 79% were married, 33.5% were in the 23-24 age group, and the income of 53.1% of them did not meet their expenses. About 53.6% of nurses were medical vocational high school graduates, 61.5% worked in their

current unit for an average of 1-4 years, 46.2% worked in the profession for an average of 1-4 years, and 48.9% did not provide care in the family.

Nurses' average burnout score was 70.36±11.00, average job satisfaction score was 2.80±0.49, and their average mental symptom score was 1.20±0.79 [Table 1]. A statistically significant negative correlation was found between nurses' burnout and job satisfaction scores (r=-0.380; p<0.001). A significant positive correlation was found between nurses' burnout and mental symptom scores (r=0.423; p<0.001). A significant negative correlation was found between nurses' job satisfaction and mental symptom scores (r=-0.408; p<0.001).

Mental symptom average scores of those aged 22 and lower and those in the age group of 23-34, and 25-26 were significantly higher compared to those aged 27 and over (p=0.022). A significant negative relationship was found between age and mental symptom scores (r=-0.159; p=0.010). The mental symptom average scores of the single nurses were significantly different from married individuals (p<0.001). The mental symptom average scores of nurses whose income did not meet their expenses were significantly higher than that of those whose income met their expenses (p<0.001) [Table 2].

Discussion

Our nurses had moderate burnout. Nurses` burnout has been shown to be increased by heavy workloads during the pandemic, posing a significant threat to members of the medical team. [17] Kaya and Işler Dalgıç [18] found the burnout level was moderate during the pandemic. In the study conducted by Liu and Aungsuroch, [19] it was determined that the work-related stress of nurses affected burnout moderately. Evidence show that long weekly working hours, fear of infection, extreme physical fatigue, and difficulty in working in full protective equipment [20] may lead to physical and mental burnout in nurses. Nurses in this study also had a low level of job satisfaction. Working in pandemic units brings along a significant workload for nurses, which causes nurses to have physical and mental difficulties. While this finding supports the increase in burnout in nurses, it emphasizes the need for close monitoring of nurses job satisfaction, improving working conditions and providing psychological support. It was determined that the mental symptom levels of the nurses were generally high. Healthcare workers are exposed to both physical and psychological stress during the COVID-19 pandemic. [21,22] A study showed that the pandemic negatively affected the mental health of nurses and that these effects continued over time. [22] Brouwer et al., [23] and Zhang et al., [24] similarly reported that nurses experienced mental problems during the COVID-19 pandemic. Our findings along with these studies reflect the moderate to high levels of job burnout and low job satisfaction among nurses.

Burnout and job satisfaction in nurses showed a reverse correlation. It seems that the physical, mental, and social disorders to which nurses are exposed in the working environment, especially during the COVID-19 pandemic has an effect on job satisfaction and burnout. [25,26]

Nurses' burnout levels increased as their mental symptom levels increased. Similarly, nurses' burnout levels decreased as their mental symptom levels decreased. Since nursing is a profession based on relationships with people, it needs mentally healthy professionals more than other professions. The result of the study is compatible with the literature [9,27,28] and signifies the fact that nurses should be mentally healthy in order to fulfill their duties and responsibilities.

The mental symptom levels of nurse was correlated with their job satisfaction. Job satisfaction can be defined as how the workers perceive that their needs are met by their job.[17] The COVID-19 pandemic has globally led to unprecedented pressure on healthcare workers, especially nurses.[20] According to recent studies, some nurses have developed mental symptoms and decreased job satisfaction, while facing the COVID-19 pandemic.[28,29] However, the knowledge on the impact of COVID-19 on nurses' mental health and job satisfaction is still incipient.

Table 1. Distribution of Nurses' Maslach Burnout, Minnesota Job Satisfaction, and Mental Symptom Checklist Scores (N=262)

Scale	Mean± SD	Median	Min.-Max.
Maslach Burnout Inventory	70.36±11.00	69.0	29.0-98.0
Minnesota Job Satisfaction Scale	2.80±0.49	2.8	1.1-3.6
Mental Symptom Checklist	1.20±0.79	1.1	0.0-4.0

Min.: Minimum. Max.: Maximum. Mean: Mean. SD: Standard deviation

Table 2. Comparison of Maslach Burnout, Minnesota Job Satisfaction, and Mental Symptom Checklist scores according to individual characteristics of nurses [a] (N=262)

Variable	N	Maslach Burnout		Minnesota Job Satisfaction		Mental Symptom Checklist	
		Mean± SD	Median	Mean± SD	Median	Mean± SD	Median
Age classes							
≤22 (1)	71	68.70±12.18	69.0 [15.0]	2.84±0.51	2.9 [0.7]	1.32±0.90	1.3 [1.6]
23-24 (2)	88	71.39±10.52	71.0 [13.8]	2.77±0.44	2.8 [0.4]	1.26±0.81	1.2 [1.4]
25-26 (3)	35	69.20±11.82	68.0 [11.0]	2.76±0.53	2.8 [0.7]	1.26±0.70	1.3 [1.3]
≥27 (4)	68	71.37±9.80	70.0 [11.8]	2.80±0.50	2.9 [0.8]	0.96±0.65	0.9 [0.8]
		F=1.113		χ^2=1.120		χ^2=9.602	
		p=0.344		p=0.772		**p=0.022**	
Gender							
Female	208	70.60±10.93	69.0 [13.0]	2.80±0.47	2.8 [0.6]	1.22±0.81	1.1 [1.4]
Male	54	69.46±11.32	70.0 [12.3]	2.80±0.56	2.9 [0.9]	1.10±0.74	1.0 [1.1]
		Z=-0.136		Z=-0.222		Z=-0.879	
		p=0.892		p=0.824		p=0.380	
Marital status							
Married	55	70.56±10.16	70.0 [14.0]	2.89±0.41	2.9 [0.6]	0.86±0.60	0.8 [0.8]
Single	207	70.31±11.24	69.0 [13.0]	2.77±0.50	2.8 [0.6]	1.29±0.82	1.2 [1.4]
		Z=-0.256		Z=-1.532		Z=-3.532	
		p=0.798		p=0.126		**P<0.001**	
School graduated							
Medical vocational high school	96	70.07±11.38	69.0 [13.0]	2.88±0.49	2.9 [0.6]	1.23±0.81	1.2 [1.4]
Associate degree	66	71.21±10.61	71.5 [14.3]	2.81±0.45	2.8 [0.8]	1.20±0.86	1.0 [1.3]
Undergraduate and higher	100	70.08±10.97	69.0 [12.0]	2.70±0.52	2.7 [0.6]	1.16±0.73	1.1 [1.1]
		F=0.262		χ^2=5.559		χ^2=0.262	
		p=0.770		p=0.062		p=0.877	
Income level							
Expenses are met	123	69.61±9.26	69.0 [11.0]	2.83±0.45	2.9 [0.6]	1.03±0.74	0.8 [1.2]
Expenses are not met	139	71.03±12.32	70.0 [14.0]	2.77±0.52	2.8 [0.8]	1.35±0.81	1.3 [1.2]
		Z=-1.274		Z=-1.065		Z=-3.290	
		p=0.203		p=0.287		**P<0.001**	
Person cared							
No one	128	70.34±10.14	70.0 [13.0]	2.77±0.47	2.8 [0.6]	1.17±0.77	1.1 [1.2]
Mother and/or father	77	70.25±12.74	69.0 [13.5]	2.73±0.54	2.8 [0.7]	1.39±0.87	1.5 [1.6]
Child/children	34	72.35±9.57	70.0 [12.3]	2.93±0.43	3.0 [0.6]	1.01±0.62	1.0 [0.9]
Other	23	67.91±11.48	72.0 [18.0]	2.99±0.42	3.0 [0.6]	0.98±0.78	0.8 [1.1]
		χ^2=2.150		χ^2=3.234		χ^2=7.379	
		p=0.542		p=0.357		p=0.061	

[a] "ANOVA" test (F-table value) statistics were used for the comparison of three or more independent groups in the data without normal distribution. "Mann-Whitney U" test (Z-table value) was used for the comparison of measurement values of two independent groups in the data without normal distribution, and "Kruskall-Wallis H" test (χ2-table value) statistics were used for the comparison of three or more independent groups.

In the present study, younger nurses showed higher mental symptoms. It can be attributed to the fact that nurses who have just started their profession and started to work at an early age, are concerned about meeting new people and beginning relationships and many unknown environments. We also found that the mental symptom scores of the single nurses were higher compared to married individuals. Being married is generally considered a protective factor for mental health. [28] According to the income status, it was determined that the mental symptom average scores of nurses whose income did not meet their expenses were significantly higher than those whose income met their expenses. When the socioeconomic status of nurses is low, they are deprived of many opportunities such as cultural and social activities, an adequate lifestyle, which causes nurses to experience

various feelings of frustration and be exposed to high levels of stress.[30,31] In this context, it can be stated that income status has a direct effect on the mental health of nurses.

This study has some limitations. The use of self-report scales is among the limitations. Future studies can employ qualitative methods to assess nurses' job satisfaction, burnout, and mental status. Furthermore, since the study was conducted in only one institution, the results can only be generalized to this institution. We did not have data about the variables before the COVID-19 pandemic, so it is difficult to relate the burnout, job satisfaction, and mental health of nurses to the pandemic.

Conclusions

Nurses had a moderate level of burnout, a low level of job satisfaction, and a high level of mental symptom. While a negative relationship was found between nurses' burnout and job satisfaction, a positive relationship was found between their burnout and mental symptom levels, and a negative relationship was found between their job satisfaction and mental symptom levels. Significant differences were found between the mental symptom levels of nurses according to their age, marital status, and income level. It may be recommended to adjust working conditions to reduce burnout and increase job satisfaction in nurses during the COVID-19. Nurse authorities also should evaluate nurses' burnout level, job satisfaction, and mental status at certain intervals, support nurses psychologically in hospitals, and increase the practices that protect nurses' mental health.

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Competing interests

The authors declare that they have no competing interests.

Abbreviations

Coronavirus disease 2019: COVID-19;
Maslach Burnout Inventory: MBI;
Minnesota Job Satisfaction Scale: MJSS;
Mental Symptom Checklist: SCL-90-R.

Authors' contributions

All authors read and approved the final manuscript. All authors take responsibility for the integrity of the data and the accuracy of the data analysis.

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Role of the funding source

None.

Availability of data and materials

The data used in this study are available from the corresponding author on request.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. The study was approved by the Ministry of Health General Directorate of Health Services (2020-05-17T16_54_25), institutional permission from a foundation university hospital and ethical approval from the clinical research ethics committee (24.07.2021/8725) were obtained.

Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

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