Original Research Paper

Nursing

ASSESSMENT OF MENTAL HEALTH SYMPTOMS OF NURSING STUDENTS DURING THE PANDEMIC PROCESS (COVID-19 PANDEMIC)

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ABSTRACT **Summary** The study was conducted cross-sectionally to evaluate the mental symptoms of nursing students during the pandemic (Covid-19) period. This study was conducted with a total of 367 students studying at Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Department of Nursing between October 2020 and April 2021. Informed Consent Form, Demographic Information Form, Leahy Emotional Schema Scale-II, State Anxiety Inventory and Beck Depression Inventory were used in the study. In the study, it was determined that the mean total score of Leahy Emotional Schema Scale-II was 77.03 ± 15.06, the mean total score of State Anxiety Inventory was 42.66 ± 19.82, and the mean total score of Beck Depression Inventory was 22.02 ± 15.48. Depression and anxiety levels were found to be high in 4th year nursing students, those who were 22 years old and those who had no siblings. According to the results of the study, it was determined that nursing students with high anxiety levels had difficulty in coping with their emotions and had high levels of depression symptoms, while those with low anxiety levels were able to cope with their emotions and had low levels of depression symptoms. In this study, it was determined that the pandemic period (Covid-19) negatively affected the mental well-being of nursing students, thus emphasising the necessity of programmes to provide psychosocial support to students during this period.

INTRODUCTION

The pandemic process started with the detection of a new coronavirus (Covid -19) that is rapidly transmitted from person to person in studies conducted as a result of the highest number of pneumonia cases reported in Wuhan, China in December 2019 (1). The feature that distinguishes Covid -19 from epidemics such as SARS and Ebola is that it is rapidly contagious during the incubation period (2). This virus spread rapidly in China, then in Asia, America, Africa and European countries and Covid-19 cases started to be seen in Turkey in March 2020 (3,4). During the pandemic, individuals were adversely affected physically and mentally (5). As in the whole world, social isolation measures were taken in Turkey, universities first implemented the distance education model and then switched to the hybrid education model (4). Nursing students are among those negatively affected by this education model. Nursing has two basic criteria: professionalisation and autonomous behaviours. In order to meet these criteria, nursing undergraduate students are given trainings aimed at providing them with the standards of the nursing process, effective communication, decision-making and leadership skills, and these trainings are reinforced with clinical practices (6-8). Nursing students are required to transfer the theoretical knowledge they receive at school to practice. Therefore, due to the partial realisation of clinical practices during the pandemic period or the uncertainty of when, where and how full-time practices will be carried out, lack of information about the Covid-19 outbreak, and uncertainty about the epidemic period, students think that their clinical skills will be insufficient, and it has been determined that they experience feelings of negative consequences such as anxiety, fear, and anger (3,10). In a study conducted on nursing students during the pandemic period, it was found that53.9% of the students quickly forgot what they learned and experienced technical problems related to distance education; in another study, it was revealed that they experienced anxiety about the exams to be held (11,12). In the study conducted by Bilik et al. it was concluded that the pandemic negatively affected the working and learning status of nursing students (13). Mood, anxiety and depression are the most frequently used concepts in the evaluation of students' mental states.

Mood state is the event that causes the onset of emotions to last longer than the emotion (14). Anxiety occurs when the person thinks that his/her integrity is under threat. If this thought is continuous, it is called 'trait anxiety'; if it occurs in the face of a danger and disappears when the danger disappears, it is called 'state anxiety' (15,16). Depression, on the other hand, is a disease that causes a person with depressed mood to be indifferent to the activities that he/she previously enjoyed and not to enjoy life (17).

When the studies on this subject were examined, no study was found in which the concepts of mood, anxiety and depression, which are determinants of mental state, were evaluated together on nursing students. The aim of this study is to examine the relationship between mood, depression and anxiety levels of nursing students during the pandemic process and to determine whether these factors are related to the sociodemographic characteristics of the students.

METHOD

Study design

A web-based descriptive survey was conducted. The survey was created using Google Forms and nursing students were sent a request to participate in the study. No financial incentive was offered for participation.

This study was conducted between October 2020 and April 2021. Students enrolled in the nursing department of a state university in Ankara, the capital of Turkey, participated in the study. The survey link distributed to the students included a detailed explanation of the purpose and importance of the study as well as its instructions. Students were then invited to fill out the questionnaire on a secure website via WhatsApp. After reading the description of the study, students indicated their consent by clicking on the link to start the research. Our e-mail addresses and telephone numbers were also included on the first page so that participants could contact us at any time.

Participants

Convenience sampling was used to select the participants: nursing students undergoing on-the-job training in hospitals. Participants were undergraduate students who were at least 20 years old. A total of 367 students participated in this study.

Variables

Informed Consent Form, Demographic Information Form, Leahy Emotional Schema Scale-II, State Anxiety Scale and Beck Depression Scale were used to collect the data of the study. The demographic information form developed by the researchers within the scope of the study consists of 17

questions that constitute the independent variables of the study.

Dependent variables consisted of total scores of Leahy Emotional Schema Scale-II (LESS-II) (28 questions), State Anxiety Scale (20 questions) and Beck Depression Scale (21 questions).

Sample size
No sample selection was made in the study and the entire population was reached. Online survey technique was used to collect the data and the study was completed with 367 nursing students.

Statistical method
Statistical evaluations of the obtained data were made in SPSS 24 package programme. In the evaluations; whether the scale scores were normally distributed was determined by Kolmogorov - Smirnov normality test. Independent sample t-test was used in comparisons of quantitative data between two groups, one-way analysis of variance (One - Way Anova) was used in comparisons of more than two groups and Bonferroni test was used when there was a difference between groups. Pearson Correlation Analysis was used to analyse the relationships between quantitative variables. Frequencies and percentages for qualitative data and arithmetic mean and standard deviation for quantitative data were given as descriptive values. The statistical significance limit was accepted as p=0.05.

Ethics statement
Ethics Committee Permission was obtained from Ankara Yıldırım Beyazıt University Faculty of Health Sciences Ethics Committee for the study (2020-27139605-100-39837).

RESULTS
It was determined that 73.8% of the nursing students participating in the study were female, 96.7% were single and 80.9% lived with their families. When the education levels of the parents were analysed, it was determined that more than 44% were high school and university graduates, 77.1% of the nursing students chose the nursing department by their own choice, 6.8% had a chronic disease and only 9% had a psychiatric disorder (Table 3.1).

Table 3.1. Distribution of LEAS, SAS and BDS mean scores (N=367)

Scales	X±SS	Min.-Max.
LEAS (22-132 points for 22 questions)	77.03±15.06	23-132
SAS	42.66±19.82	20-80
BDS (0-63 points for 21 questions)	22.02±15.48	0-63
BDS Grouping None (0-9 points) Light (10-16 points) Middle (17-29 points) Strong (30-63 points)	81 (%22.1) 68 (%18.5) 129 (%35.1) 89 (%24.3)	

When we looked at the descriptive values of LESS, it was determined that the highest scores were obtained from questions 24, 26 and 27, and the lowest scores were obtained from questions 2, 10 and 12. It was determined that the internal consistency coefficient of the scale was high (= 0.833) and there was no statistically significantrelationship between the characteristics of the students and their mean LEAS scores (p>0.005). The mean LESS total score, SAS and BDS scores of nursing students were found to be at a moderate level (Table 3.1).

Table 3.2. Examination of the relationship between some characteristics of nursing students and their SAS general score averages and BDS total score averages. (N=367)

Features	SAS			BDS		
	X±SS	Test statistics	P	X±SS	Test statistics	P
Class						
1	45.4±3.57			16.64±11.42		
2	46.72±4.19	F=6.786	0.001	20.20±4.50	7.148	0.001
3	46.22±3.81			22.74±14.90		
4	41.54±5.96			26.33±18.11		
Age						
18	43.72±4.47			17.14±8.82		
19	44.84±3.54			21.78±15.14		
20	46.16±4.41	F=4.524	0.001	17.12±12.33	4.400	0.001
21	45.74±3.99			21.89±15.85		
22	41.18±6.04			27.30±17.68		
=>23	47.42±4.77			19.44±13.18		
Gender						
Woman Male	45.86±4.08 41.14±6.01	t=4.245	0.001	21,08±14,69 24,64±17,36	1,943	0,053
Marital status						
Single Married	42.42±4.78 50.16±3.57	t=2.057	0.040	22,10±15,66 19,42±8,55	0,591	0,555
Number of children in the family	40.04±4.92			31.94±17.86		
1	44.1±4.92			21.62±15.00		
2	46.88±3.59			18.21±12.71		
3 4	46.56±3.42 45.0±4.05	F=5.670	0.001	19.67±13.88 21.07±16.48	8.423	0.001
=>5						
Mother Education						
Literate First	48.66±3.08 46.98±3.31	F=5.028	0.001	26.50±21.11 17.49±11.93		
Middle	45.28±4.71			23.24±14.79	4.470	0.002

In the study, the Independent Group, "t" test (Independent Samples t Test) was used to examine the differences between the two groups, Levene's test was used to determine whether the variances were equal in the "t" test. Analysis of variance (one-way Anova) was applied to compare more than two groups.

There is a statistically significant difference between the mean SAS scores of nursing students and their grade, age,

gender, marital status, number of children in the family, mother's education level, whether they chose the nursing department willingly, whether they have hobbies and where they live (p=0.05). In further analysis, it is seen that this difference is caused by 4th graders, 22 years old, females, married, having only one child in the family, having a high school graduate mother, receiving education in the nursing department with the request of the family, having hobbies and living alone, respectively. In the study, it was found that the mean scores of nursing students on the SCS were higher in those who were in the 4th grade, in the age group of 22, those who had no siblings, those whose mothers were high schoolgraduates, women, married women, those who chose the nursing department at the request of their families, those who had hobbies and those who lived alone. The level of depression was found to be higher in 4th year nursing students, 22 years old and those who had no siblings, lower in those whose mothers were primary school graduates and those with middle income level, and higher in those who made decisions within the family, those who had no hobbies and those who lived in dormitories. These comparisons were statistically significant (p=0.05) (Table 3.2).

Table 3.3. Distribution of the correlation between the mean scores of LEAS, SAS and BDS* (N=367)

SCALES	LEAS	Test Result	SAS	Test Result
	r	p	r	P
NGO	0,062	0,237	—	---
BSA	0,323	0,001	-0,293	0,001

Pearson correlation analysis

The relationships between LEAS, SAS and BDS scores are given in Table 3. Accordingly, there is a weak positive correlation between SAS and LEAS. A negative, moderate and close relationship was found between SAS and BDS(Table 3).

DISCUSSION

In the study, the LESS score of nursing students was found to be at a medium level. No study on students using LESS was found in the literature. High scores obtained from this scale are interpreted as a high level of negative emotional schema and predisposition to depression. This result suggests that nursing students have negative psychological effects during the pandemic period. According to the results of the study, nursing students have adapted to the unusual living conditions that emerged with the Covid-19 pandemic process and they think that this process will not prevent them from achieving their individual goals. In addition, it was determined that students' attitudes towards their emotions and coping strategies with these emotions did not change according to their socio- demographic characteristics. It is thought that the reason for this is that the way of coping with emotions varies from person to person, the reactions of people to emotions differ according to the current event, their point of view during the event, the support mechanisms they have with them, or there are changes in the reactions given to the same emotions at different times. According to the study conducted by Güler and Altay, nursing students use problem solving and avoidance coping methods to cope with stress (18). This study supports this research.

When the mean SAS scores of the students were analysed, it was seen that they experienced moderate anxiety (Table 3.1). The results of Çağatay et al. and the study of Durgun H. et al. support this result (19,20). Mulyadi M. et al. analysed 17 studies and found that 32% of nursing students experienced anxiety during the Covid-19 pandemic (21). The results of a limited number of studies and the findings we obtained were evaluated as similar. The moderate anxiety level of nursing students may be due to reasons such as students' fears about clinical education, feeling of loneliness caused by social

isolation, the risk of getting sick themselves or their relatives, the risk of experiencing lack of concentration due to inability to adapt to online education or the risk of experiencing internet-related problems in online exams, and economic difficulties. The relationship between SAS and descriptive characteristics was examined and the results obtained by further analysis were discussed.

It was determined that anxiety levels of female nursing students were high. Yanık D. and Yesilcinar I. found that female students had higher anxiety levels than male students in their study (22). Alici N. and Copur E. stated that female students experienced more anxiety during the pandemic process (23). This finding can be explained as women have higher anxiety levels because they think that they have more responsibilities than men, they are afraid of infecting their families or children, and they internalise their emotions. Among nursing students, those who were married, single and had only one child were found to have high levels of anxiety. In a study conducted by Uğurlu et al. it was concluded that depression and anxiety levels decreased as the number of people living at home increased (24). In the literature, no study was found in which marital status had an effect on anxiety level in nursing students during the Covid-19 pandemic period. The reasons for this may be the decrease in the income of married nursing students during the pandemic period, uncertainty about the education process, the risk of contracting the disease or transmitting this disease to their families. It is thought that students living alone may experience more anxiety because they feel lonely, fear that they cannot take care of themselves if they get sick, and cannot get support from their families or friends due to social isolation. In the study, it was determined that the anxiety of those who chose the department willingly was low. It is thought that the students who choose the nursing department willingly act in line with the concepts of 'caring' and 'helping', which are the basic components of nursing, and that these students have the idea that they will be beneficial to sick individuals. In the literature, no study was found in which there was a significant relationship between the level of anxiety in nursing students and whether they chose the department willingly or not. In the study, it was determined that the anxiety levels of the 4th grade students were high. Işık C. and Küğcümen G. stated in their study that 2nd and 3rd grade students had higher anxiety levels than 4th grade students during the pandemic period (25). This study does not support this research. It is thought that senior nursing students experience more anxiety due to the fact that they will start working during the pandemic period, the high risk of catching the disease or transmitting the disease to their families, and uncertainty about when the epidemic period will end. In the study, it was determined that nursing students in the age group of 22 years and those whose mothers were high school graduates had high anxiety levels. In a study conducted by Browning et al. it was found that anxiety levels of students aged 18-24 years were high (26). This study supports this research. In the study conducted by Yanık D. and Yeşilçınar İ., it was determined that the anxiety of transmitting diseases increased as the age of nursing students decreased (22). Alici N. and CopurE. stated in their study that female students experienced more anxiety during the pandemic process (23). This finding can be explained as women have higher anxiety levels because they think that they have more responsibilities than men, they are afraid of infecting their families or children, and they internalise their feelings. Among the nursing students, the anxiety levels of those who were married, single and had only one child were found to be high. In a study conducted by Uğurlu et al. it was concluded that depression and anxiety levels decreased as the number of people living at home increased (25). This study is similar to previous studies. This may be due to being away from family or friend support systems, boredom, uncertainty about the disease, and fear of getting sick from common areas

in the dormitory. In the study, it was found that 4th year nursing students had higher depressive symptoms. Gao J. et al. also reported that fourth-year nursing students had higher levels of depressive symptoms (27). This study is consistent with this study. The reason for this situation is thought to be future anxiety, anxiety about starting working life during the pandemic period, fear of getting sick and being separated from their relatives. In the study, it was concluded that students without hobbies had more depression symptoms. The reason for this is thought to be boredom, inability to enjoy anything, inability to decide how to spend time, unhappiness and hopelessness that occur during the social isolation period. In the study, it was concluded that depression symptoms were higher in 22-year-old nursing students and those who made their own decisions. Uğurlu YK. et al. concluded that the level of depression was higher in the 18-20 age group than in women over 20 years of age (24). However, gender was not found to be significant in this study and results consistent with these other factors could not be obtained. In the study, depression symptoms were found to be lower in those whose mothers were primary school graduates and those with middle income level. In the study of Juchnowicz D. et al. it was found that depression level was higher in those with low income (28). This result was considered to be compatible with the study.

CONCLUSION

It is important to protect the mental health of nursing students who will contribute to the development of the nursing profession. According to the results obtained from the research; in the research, it was determined that the pandemic period (Covid -19 Outbreak) negatively affected nursing students, psycho-education and seminars including effective coping methods for students, making plans and programmes to provide psychosocial support to students in these processes, and establishing psychological support units both face-to-face and online. In order for students to spend their free time at universities in a quality way, it is recommended to organise various hobbies or various skills course programmes, to plan for the establishment of a student monitoring centre in the department and to conduct psychological evaluations intermittently.

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