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RESEARCH ARTICLE

THE PRESENCE OF NOMOPHOBIA IN ASSISTANT HEALTH STAFF WORKING IN A HOSPITAL AND ITS EFFECT ON WORK STRESS

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ABSTRACT

Purpose: This study aims to examine the presence of nomophobia in assistant healthcare personnel working in a hospital and its effect on work stress.
Material and Methods: This complementary study was conducted with 207 healthcare professionals who met the study criteria and agreed to participate in the study. Personal Information Form, Nomophobia Questionnaire (NMP-Q), and Work Stress Scale were used to collect the data. Percentage, Mann-Whitney U, Kruskal-Wallis H, and $\chi 2$ methods were used to evaluate the data.
Results: The reliability coefficient of the Nomophobia Questionnaire Total-NMPQ was found to be 0.95. It was found that singles, nurses, EMT, and other healthcare personnel, emergency and intensive care workers, and employees between 10-19 years were significantly higher than others when the total and sub-scale scores of nomophobia were evaluated in the whole group ($p<0.05$). The reliability coefficient of the work stress scale was found to be 0.82. It was found that women, employees between 10-19 years, nurses, and midwives were significantly higher than others when the work stress scores were evaluated in the whole group ($p<0.05$). A positive, very weak, and statistically significant correlation was found between the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and total nomophobia scores and the work stress scale ($p<0.05$). As the total score of the Nomophobia Questionnaire increases, the scores of the work stress scale will also increase. Likewise, as the total score of the Nomophobia Questionnaire decreases, the work stress scale scores will also decrease.
Conclusion: The results of this study show that there is nomophobia and work stress in healthcare personnel and there is a directly proportional relationship between nomophobia and work stress. In-service training and support can be provided to healthcare personnel on addiction and stress.

Keywords: healthcare personnel, nomophobia, work stress

INTRODUCTION

It has become very easy for people of all ages to quickly access the information they want thanks to today's technological developments. It is understood that mobile phones, one of the most common means of the use of technology among people, have an increasingly important place and a very common consumer audience (1).

Frequent and repetitive use of mobile phones that affect the functioning of daily life may occur over time in people as behavioral disorders and addiction. It is

necessary to be careful when evaluating these habitual behaviors as addiction behaviors (2).

Dealing with a certain behavior too much, reaching the point of breaking away from real life, starting to enjoy this behavior and not being able to stay away, and showing withdrawal symptoms such as tension and restlessness when prevented cause dysfunctionality as in all kinds of addiction.

The concept of nomophobia is a newly used concept in the literature, which means the fear of staying away from the mobile phone and is derived from the words “no mobile phone phobia” in English. In other words, nomophobia is the involuntary fear experienced by the individual when they cannot access their mobile device or communicate on a mobile device in clinical psychology (3).

Work stress is an undesirable condition that results in mental and physical illness as a result of an inefficient struggle with physical stress sources. One of the most important stress factors for people who face many stressful situations every day of life is work stress. Many reasons may cause work stress in the workplace. Each employee may be affected by these sources of stress in different ways (4, 5).

The service expected from healthcare professionals and their ability to meet this service determine the stress or tension levels of the employees. Healthcare professionals may experience stress arising from working conditions more intensely because they have a responsibility for their direct working conditions with human health (6).

Physical, behavioral, emotional, and psychological problems may be seen in employees due to high stress and tension related to work (7).

People are obliged to continue a large section of their lives by pushing against their own boundaries no matter what social environment they are in and whatever work they do. For this reason, it is inevitable for all people to live in a stressful environment. Therefore, stress has become a word that we frequently encounter in our daily life and business life (8).

Working life has a very important place in everyone's life since employees spend a significant part of their lives in a business environment. Working life is an important part of people's social life and thus, it ensures the continuity of their lives (9).

Especially the healthcare industry has many stressful factors in its structure. Some of these factors include providing services and care to patients experiencing intense stress, having to provide emotional support to patients and their relatives when necessary, frequent stressful events in daily operations, and inadequacies in healthcare. It differs in workplaces due to such factors (10, 11). It is an undeniable fact that this stress has increased during the pandemic.

Investigating the prevalence of mobile/smartphone use and its effects on users has perhaps been one of the most emphasized issues recently (12).

Our study is important in terms of revealing the risk of stress and nomophobia faced by healthcare professionals who work hard to treat diseases and protect public health. In addition, it was considered to increase the awareness and attention of healthcare personnel in this regard. There is no study on the level of nomophobia on assistant healthcare personnel and its relationship with work stress. Therefore, the relationship between nomophobia and the job stress of assistant healthcare personnel was discussed in this study.

MATERIAL AND METHODS

Place and Date of Research

This descriptive study was carried out with NEU ethics committee permission (07.07.2020; 86737044-806.0l.03), Konya Provincial Health Directorate, and institution permission. The study was conducted with assistant healthcare personnel working in Beyşehir district public hospital in Konya province in Turkey between November 30 and December 30, 2020, in the form of an online survey method.

Type, Population and Sample of Research

This study is complementary research. The population of the study consists of 312 assistant healthcare personnel working in the district hospital. It is aimed to reach at least 200 people with a 95% confidence interval and 5% error margin with the sample formula whose population is known. The sample of the study consisted of 207 assistant healthcare personnel who accepted the study.

Inclusion Criteria:

Volunteering to participate in the study and being an assistant healthcare employee constitute the criteria for inclusion in the study. Employees with administrative and annual leave were not included in the study.

Data Collection Tools:

The persons in the units where the study would be conducted were interviewed online and information

was given about the purpose and scope of the research after obtaining the necessary permissions to carry out the study.

1. Personal Information Form: It consists of a 7-question form prepared by the researchers in line with the literature and covering the questions of the education and working units including the socio-demographic characteristics of healthcare professionals (age, gender, etc.).

2. Nomophobia Questionnaire (NMP-Q): It was developed by Yıldırım and Correia in 2015 and adapted to Turkish by Yıldırım, Sumuer, Adnan, Yıldırım in 2016. The scale consisting of 20 items is a 7-point Likert type and has 4 sub-scales: Lack of Access to Information (4 items), Losing Connection (5 items), Inability to Communicate (6 items), Inability to Feel Comfortable (5 items). The Cronbach's Alpha reliability coefficient was found to be 0.95 for the original scale and 0.92 for the version adapted to Turkish. The reliability coefficients of the four sub-scales were given as 0.94, 0.87, 0.83, and 0.81, respectively in the original scale. If the total score of the scale is 20, it is classified as no nomophobia; if it is higher than 20 but less than 60, it is classified as mild nomophobia; if it is 60 and above but less than 100, it is classified as moderate nomophobia; if it is 100 and above but 140 and below, it is classified as extreme nomophobia (3, 13).

3. Work Stress Scale: The 7-question work stress scale developed by House and Rizzo in 1972 and with a reliability of 0.90 was used to determine the work stress levels of healthcare professionals (14). The Turkish translation, reliability, and validity of the work stress scale used by Efeoğlu (2007) and Turunç & Erkuş (2011) were used (15). A 5-point Likert Scale was used for the questions in the scale. The answers in the data collection form were prepared from a 5-point scale from the statements “1- Strongly Disagree, 2- Disagree, 3- Indecisive, 4- Agree, 5- Strongly Agree”. Participants were scored as the lowest 7 and the highest 35 points. The high score indicates a high level of work stress (15, 16).

Data Collection

The persons in the units where the study would be conducted were interviewed and information was given about the purpose and scope of the research after obtaining the necessary permissions to carry out the study. The data were collected through questionnaires created via Google Forms over the Internet in this study.

Data Evaluation

Statistical analyses were performed using SPSS (IBM SPSS Statistics 24). Frequency tables and descriptive statistics were used to interpret the results. Non-parametric methods were used for measurement values that were not suitable for normal distribution. "Mann-Whitney U" test (Z-table value) was used to compare the measurement values of two independent groups in accordance with non-parametric methods and the "Kruskal-Wallis H" test (χ2-table value) was used to compare the measurement values of three or more independent groups. Bonferroni correction was applied for binary comparisons of variables with significant differences for three or more groups. Spearman's rank correlation coefficient was used to examine the relationship between measurement values that did not have a normal distribution.

Ethical Remarks

The research was approved by Necmettin Erbakan University Pharmaceutical and Non-Medical Device Research Ethics Committee. Ethics Committee Decision dated 07.07.2020 and numbered 86737044-806.0l.03 provided by Konya Governorship Provincial Health Directorate and institutional permission were obtained. “Informed Consent Form” was obtained online from the participants who agreed to participate after the necessary explanations were made about the study.

RESULTS

It was determined that the mean age of the professionals was 35.46±8.15 (years) and 66 (31.9%) were in the ≤30 age group. It was determined that 164 employees (79.2%) were female, 150 (72.5%) were married, and 169 (81.6%) were at bachelor's degree level. It was determined that 108 employees (52.1%) were nurses, 53 (25.6%) worked in internal units, and 77 (37.2%) worked for <10 years (Table 1). The results related to the responses of auxiliary healthcare professionals to the scales are given in Table 1.

Findings regarding the mean and standard deviation values of the responses of assistant healthcare professionals to the scales are given in Table 2.

Table 1. Distribution of results related to auxiliary healthcare personnel

Variable (N=207)	*n*	%
Gender		
Female	164	79.2
Male	43	20.8
Age groups [$\overline{X} \pm$ S.S.→35,46±8,15 (yıl)]		
≤30	66	31.9
31-35	37	17.9
36-40	45	21.7
>40	59	28.5
Marital status		
Married	150	72.5
Single	57	27.5
Education level		
High School	13	6.3
Bachelor's Degree	169	81.6
Postgraduate Degree	25	12.1
Profession		
Nurse	108	52.1
Emergency medical technician	14	6.8
Midwife	24	11.6
Healthcare professional	36	17.4
Other	25	12.1
Unit		
Emergency room	37	17.9
COVID-19	18	8.7
Operating room	39	18.8
Internal	53	25.6
Intensive care	36	17.4
Other	24	11.6
Professional experience [$\overline{X} \pm$ S.S.→13,46±8,81 (yıl)]		
<10	77	37.2
10-19	69	33.3
≥20	61	29.5

When the reliability coefficient of the scales is examined;

Work stress scale= 7 items and Cronbach-α coefficient= 0,828

Nomophobia Questionnaire: Lack of access to information= 4 items and Cronbach-α coefficient=0,913

Nomophobia Questionnaire: Waiving comfort = 5 items and Cronbach-α coefficient=0,875

Nomophobia Questionnaire: Inability to communicate = 6 items and Cronbach-α coefficient=0,950

Nomophobia Questionnaire: Losing online connection = 5 items and Cronbach-α coefficient=0,939

Nomophobia Questionnaire Total-NMPQ= 20 items and Cronbach-α coefficient=0,959 it has been found. It was determined that the responses of auxiliary healthcare professionals to the scales were generally very high in reliability.

A statistically significant difference was found in terms of work stress scale scores according to the gender of the employees (Table 3, Z=-4.111; p=0.000). Women's work stress scale scores were statistically significantly higher compared to men's work stress scale scores.

There was no statistically significant difference in the work stress scale scores according to the age groups, marital status, education levels, and the unit (Table 3, p>0.05).

A statistically significant difference was found in terms of work stress scale scores according to the profession of the employees (Table 3, $\chi 2$=13.920; p=0.008). A statistically significant difference was found between nurses and midwives and healthcare professionals as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Nurses' and midwives' work stress scale scores were

Table 2. Distribution of results related to the scale

Scale (N=207)		Average	Standard Deviation	Median	Min	Max
Work stress scale		24.98	6.75	26.0	7.0	35.0
Nomophobia Questionnaire	*Lack of access to information*	14.87	7.22	14.0	4.0	28.0
	Waiving comfort	18.13	8.54	17.0	5.0	35.0
	Inability to communicate	25.47	10.87	26.0	6.0	42.0
	Losing online connection	13.73	8.33	12.0	5.0	35.0
	Total-NMPQ	72.20	29.98	72.0	22.0	140.0

Table 3. Comparison of work stress scale scores according to employee results

Variable (N=207)		Work stress scale		Statistical analysis*
	N	$\bar{X} \pm S.S.$	Median [IQR]	Probability
Gender				
Female	164	25.99±6.46	27.0 [9.0]	Z=-4.111
Male	43	21.14±6.52	22.0 [12.0]	***p*=0.000**
Age groups				
≤30	66	24.55±7.95	26.0 [11.3]	
31-35	37	25.54±6.47	27.0 [10.0]	χ^2=1.213
36-40	45	25.67±6.39	26.0 [9.0]	p=0.750
>40	59	24.59±5.76	26.0 [9.0]	
Marital status				
Married	150	24.93±6.81	27.0 [10.0]	Z=-0.018
Single	57	25.11±6.67	25.0 [10.0]	p=0.985
Education level				
High School	13	23.77±6.35	27.0 [9.0]	χ^2=1.550
Bachelor's Degree	169	24.83±6.83	26.0 [8.5]	p=0.461
Postgraduate Degree	25	26.60±6.38	28.0 [13.0]	
Profession				
Nurse (1)	108	25.69±6.67	26.5 [9.0]	
Emergency medical	14	24.00±8.82	25.0 [17.3]	χ^2=13.920
technician (2)	24	28.08±3.53	28.5 [2.0]	***p*=0.008**
Midwife (3)	36	22.25±6.52	22.0 [9.8]	**[1,3-4]**
Healthcare professional (4)	25	23.44±7.12	23.0 [13.5]	
Other (5)				
Unit				
Emergency room	37	25.46±7.63	28.0 [13.5]	
COVID-19	18	22.78±7.95	24.0 [10.0]	χ^2=9.975
Operating room	39	24.05±5.82	26.0 [8.0]	p=0.076
Internal	53	24.75±6.74	26.0 [10.0]	
Intensive care	36	27.72±5.63	27.0 [7.0]	
Other	24	23.79±6.69	23.5 [14.0]	
Professional experience				
<10 (1)	77	23.73±7.68	25.0 [11.0]	χ^2=6.077
10-19 (2)	69	26.43±6.62	27.0 [7.5]	***p*=0.048**
≥20 (3)	61	24.91±5.28	26.0 [7.5]	**[1-2]**

"Mann-Whitney *U*" test (*Z*-table value) was used to compare the measurement values of two independent groups in data without normal distribution and the "Kruskal-Wallis *H*" test ($\chi 2$ -table value) was used to compare three or more independent groups.

statistically significantly higher compared to other healthcare personnel.

A statistically significant difference was found in terms of work stress scale scores according to the professional experience of the employees (2=6.077; p=0.048). A statistically significant difference was found between the employees working for <10 years and those working for 10-19 years as a result of the

Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Work stress scale scores of employees for 10-19 years are statistically significantly higher compared to those of employees for <10 years (Table 3).

A statistically significant difference was found in terms of the inability to access information scores according to the age groups of the employees (Table 4, $\chi2=15.836$; $p=0.001$). A significant difference was found between those in the age groups ≤30 and 31-35 and those in the age group >40 as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Those aged ≤30 and 31-35 years had statistically significantly higher inability to access information scores compared to those aged >40 years.

A statistically significant difference was found in terms of the inability to access information scores according to the marital status of the employees (Table 4, $Z=-3.676$; $p=0.000$). Single people's inability to access information scores were statistically significantly higher compared to married people.

A statistically significant difference was found in terms of waiving comfort according to the marital status of the employees (Table 4, $Z=-2.743$; $p=0.003$). Single people's waiving comfort scores were statistically significantly higher compared to married people.

A statistically significant difference was found in terms of losing online connection according to the marital statuses of the employees (Table 4, $Z=-4.353$; $p=0.000$). Single people's losing online connection scores were statistically significantly higher compared to married people.

A statistically significant difference was found in terms of the Total-NMPQ scores according to the marital status of the employees ($Z=-3.287$; $p=0.001$). Single people's Total-NMPQ scores were statistically significantly higher compared to married people.

A statistically significant difference was found in terms of the inability to access information according to the education level of the employees ($\chi2=7.952$; $p=0.019$). A significant difference was found between those who graduated from high school and had a bachelor's degree and those who had a postgraduate degree as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Postgraduates' inability to access information scores were statistically significantly higher compared to high school graduates and those who had a bachelor's degree.

A statistically significant difference was found in terms of the inability to access information according to the profession of the employees (Table 4, $\chi2=23.585$; $p=0.000$). A significant difference was found between those who were midwives and those who were nurses, EMTs, healthcare professionals, and other personnel as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Nurses, EMTs, healthcare personnel, and other personnel's inability to access information scores were statistically significantly higher compared to midwives.

A statistically significant difference was found in terms of waiving comfort scores according to the profession of the employees (Table 4, $\chi2=17.790$; $p=0.001$). A significant difference was found between those who were midwives and those who were nurses, EMTs, healthcare professionals, and other personnel as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Nurses, EMTs, healthcare personnel, and other personnel's waiving comfort scores were statistically significantly higher compared to midwives.

A statistically significant difference was found in terms of losing online connection scores according to the profession of the employees (Table 4, $\chi2=17.790$; $p=0.001$). A significant difference was found between midwives and nurses and healthcare personnel as a result of Bonferroni-corrected pairwise comparisons conducted to determine which group caused the significant difference. Nurses and healthcare personnel's losing online connection scores were statistically significantly higher compared to midwives.

A statistically significant difference was found in terms of Total-NMPQ scores according to the profession of the employees (Table 4, $\chi2=13.602$; $p=0.009$). A significant difference was found between those who were midwives and those who were nurses, EMTs, healthcare professionals, and other personnel as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Nurses, EMTs, healthcare personnel, and other personnel's waiving comfort Total-NMPQ scores were statistically significantly higher compared to midwives.

Table 4. Comparison of nomophobia questionnaire scores according to employee results

Variable (N=207)	***Scale***	*Lack of access to information*		*Waiving comfort*		*Inability to communicate*		*Losing online connection*		***Total– NMPQ***	
	n	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***
Gender											
Female	164	14.41±7.19	13.0 [12.0]	18.37±8.74	18.0 [15.8]	25.57±11.06	26.5 [20.0]	14.09±8.39	12.0 [14.0]	72.43±31.29	73.5 [54.8]
Male	43	16.65±7.15	16.0 [12.0]	17.21±7.73	17.0 [10.0]	25.09±10.25	25.0 [15.0]	12.35±8.06	10.0 [13.0]	71.30±24.66	70.0 [32.0]
Statistical analysis*		*Z*=-1.842		*Z*=-0.647		*Z*=-0.265		*Z*=-1.382		*Z*=-0.213	
Probability		*p*=0.065		*p*=0.518		*p*=0.791		*p*=0.167		*p*=0.831	
Age groups											
≤30 (1)	66	16.56±7.21	16.0 [12.0]	18.42±8.99	18.0 [13.5]	25.41±10.79	27.0 [18.3]	15.26±9.00	14.0 [13.3]	75.65±30.68	74.5 [51.3]
31-35 (2)	37	16.27±6.13	16.0 [8.0]	19.30±7.89	19.0 [12.5]	26.62±10.25	31.0 [17.5]	14.08±8.13	12.0 [14.0]	76.27±27.25	72.0 [36.0]
36-40 (3)	45	14.84±7.65	15.0 [13.0]	18.62±9.07	17.0 [18.0]	27.07±11.27	32.0 [21.0]	13.84±8.89	11.0 [15.0]	74.38±31.72	77.0 [58.0]
>40 (4)	59	12.14±6.87	11.0 [9.0]	16.78±8.01	15.0 [12.0]	23.59±11.01	22.0 [21.0]	11.71±6.93	10.0 [11.0]	64.12±28.64	60.0 [48.0]
Statistical analysis		χ^2=15.836		χ^2=2.808		χ^2=2.926		χ^2=4.132		χ^2=6.226	
Probability		***p*=0.001**		*p*=0.422		*p*=0.403		*p*=0.248		*p*=0.101	
Difference		**[1,2-4]**									
Marital status											
Married	150	13.76±7.10	12.0 [11.0]	17.15±8.48	15.5 [14.3]	24.63±10.99	24.0 [19.0]	12.19±7.66	10.0 [12.0]	67.73±28.97	68.0 [47.5]
Single	57	17.81±6.77	16.0 [11.5]	20.68±8.22	18.0 [14.0]	27.68±10.33	29.0 [17.5]	17.79±8.74	18.0 [10.5]	83.96±29.66	79.0 [42.5]
Statistical analysis		*Z*=-3.676		*Z*=-2.743		*Z*=-1.781		*Z*=-4.353		*Z*=-3.287	
Probability		***p*=0.000**		***p*=0.006**		*p*=0.075		***p*=0.000**		***p*=0.001**	
Education level											
High school (1)	13	12.85±6.96	12.0 [9.0]	14.46±7.43	17.0 [11.5]	23.08±10.45	22.0 [16.5]	13.15±6.41	12.0 [10.5]	63.54±26.63	66.0 [38.5]
Bachelor's degree (2)	169	14.53±7.37	14.0 [12.0]	18.16±8.64	17.0 [14.5]	25.51±11.10	26.0 [20.0]	13.47±8.41	11.0 [15.0]	71.67±30.51	72.0 [53.0]
Postgraduate degree (3)	25	18.24±5.33	19.0 [9.5]	19.80±8.08	21.0 [12.0]	26.44±9.67	30.0 [15.5]	15.80±8.70	15.0 [14.0]	80.28±27.11	81.0 [39.5]
Statistical analysis		χ^2=7.952		χ^2=3.402		χ^2=0.714		χ^2=2.164		χ^2=3.093	
Probability		***p*=0.019**		*p*=0.183		*p*=0.700		*p*=0.339		*p*=0.213	
Difference		**[1,2-3]**									

"Mann-Whitney U" test (Z-table value) was used to compare the measurement values of two independent groups in data without normal distribution and the "Kruskal-Wallis H" test (χ2 -table value) was used to compare three or more independent groups.

Table 4. Continued

Variable (N=207)	n	*Lack of access to information*		*Waiving comfort*		*Inability to communicate*		*Losing online connection*		**Total– NMPQ**	
		$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***	$\bar{X} \pm S.S.$	***Median [IQR]***
Profession											
Nurse (1)	108	15.29±7.08	14.0 [11.0]	18.94±8.35	17.5 [13.0]	25.94±10.57	26.0 [19.0]	14.92±8.06	14.0 [12.0]	75.09±29.67	74.0 [51.0]
Emergency medical technician (2)	14	16.93±8.17	17.0 [12.8]	21.14±10.76	23.5 [20.8]	25.43±13.80	27.5 [25.8]	13.00±10.95	10.5 [21.0]	78.50±39.94	80.5 [79.3]
Midwife (3)	24	8.96±5.64	7.5 [5.5]	11.58±5.44	10.0 [5.8]	21.58±9.65	21.0 [16.5]	8.88±4.87	7.0 [6.0]	51.00±19.08	46.5 [26.3]
Healthcare professional (4)	36	15.28±7.72	13.5 [15.3]	17.83±7.99	19.0 [12.5]	25.58±11.51	27.0 [20.0]	15.94±8.36	13.0 [14.5]	72.64±28.95	75.0 [53.0]
Other (5)	25	17.04±5.24	16.0 [7.5]	19.60±8.78	18.0 [14.5]	27.00±10.60	30.0 [18.0]	12.24±9.15	8.0 [11.0]	75.88±28.85	77.0 [28.5]
Statistical analysis*		χ^2=23.585		χ^2=17.790		χ^2=3.952		χ^2=14.373		χ^2=13.602	
Probability		***p*=0.000**		***p*=0.001**		*p*=0.413		***p*=0.006**		***p*=0.009**	
Difference		**[3-1,2,4,5]**		**[3-1,2,4,5]**				**[3-1.4]**		**[3-1,2,4,5]**	
Unit											
Emergency room (1)	37	17.38±8.02	17.0 [13.5]	20.49±9.75	21.0 [17.0]	29.08±11.29	33.0 [18.0]	16.16±10.19	14.0 [19.0]	83.11±33.32	77.0 [56.0]
COVID-19 (2)	18	13.67±5.50	14.0 [4.5]	16.78±6.36	17.0 [4.5]	23.06±9.31	22.5 [9.8]	16.06±6.81	15.5 [7.3]	69.56±22.44	72.5 [21.5]
Operating Room (3)	39	12.21±5.85	11.0 [5.0]	15.13±7.36	15.0 [11.0]	21.26±9.80	18.0 [18.0]	10.74±5.54	10.0 [11.0]	59.33±23.40	53.0 [39.0]
Internal (4)	53	13.04±7.49	12.0 [11.5]	16.15±8.42	14.0 [12.0]	24.15±10.56	24.0 [18.0]	12.17±7.90	12.0 [14.0]	65.51±29.38	59.0 [40.0]
Intensive care (5)	36	17.69±7.20	17.5 [11.5]	21.83±7.47	23.0 [11.0]	28.25±10.78	30.5 [18.5]	16.22±8.65	14.5 [14.5]	84.00±30.05	89.5 [52.0]
Other (6)	24	16.08±6.12	16.0 [6.0]	19.17±9.08	18.5 [16.5]	27.29±11.51	29.5 [20.3]	12.79±8.65	9.5 [15.0]	75.33±30.03	73.5 [48.3]
Statistical analysis		χ^2=20.726		χ^2=17.624		χ^2=14.974		χ^2=13.728		χ^2=19.496	
Probability		***p*=0.001**		***p*=0.003**		***p*=0.010**		***p*=0.017**		***p*=0.002**	
Difference		**[3-1.5]**		**[3,4-5]**		**[1-3]**		**[3-2.5]**		**[3-1.5]**	
Professional experience											
<10 (1)	77	16.48±7.12	16.0 [12.5]	18.36±8.80	18.0 [12.0]	24.70±10.61	25.0 [16.0]	14.10±8.86	12.0 [13.0]	73.65±29.91	73.0 [43.0]
10-19 (2)	69	15.49±7.12	15.0 [10.0]	19.06±8.45	19.0 [14.5]	27.87±10.11	31.0 [18.0]	14.87±8.20	14.0 [13.5]	77.29±28.89	77.0 [43.0]
≥20 (3)	61	12.14±6.80	11.0 [9.0]	16.77±8.26	15.0 [15.0]	23.72±11.69	22.0 [23.0]	11.97±7.62	9.0 [14.0]	64.61±30.27	57.0 [55.0]
Statistical analysis		χ^2=14.692		χ^2=2.514		χ^2=5.055		χ^2=4.192		χ^2=6.551	
Probability		***p*=0.001**		*p*=0.284		*p*=0.080		*p*=0.123		***p*=0.038**	
Difference		**[1,2-3]**								**[2-3]**	

"Mann-Whitney U" test (Z-table value) was used to compare the measurement values of two independent groups in data without normal distribution and the "Kruskal-Wallis H" test (χ2 -table value) was used to compare three or more independent groups.

Table 5. Examination of the relationship between scale scores

Correlation* (N=207)		**Work stress scale**
Lack of access to information	*r*	0.011
	p	0.874
Waiving comfort	*r*	0.181
	p	**0.009**
Inability to communicate	*r*	0.203
	p	**0.003**
Losing online connection	*r*	0.238
	p	**0.001**
Total-NMPQ	*r*	0.193
	p	**0.005**

*"Spearman's" correlation coefficient was used to examine the relationship between two quantitative data that did not have a normal distribution.

A statistically significant difference was found in terms of the inability to access information scores according to the unit of the employees (Table 4, $\chi2=20.726$; p=0.001). A significant difference was found between those working in surgical units and those working in emergency and intensive care units as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Emergency and intensive care personnel's inability to access information scores were statistically significantly higher compared to those working in surgical units.

A statistically significant difference was found in terms of waiving comfort scores according to the unit of the employees (Table 4, $\chi2=17.624$; p=0.003). A significant difference was found between those working in surgical units and those working in internal and intensive care units as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Intensive care personnel's waiving comfort scores were statistically significantly higher compared to those working in surgical and internal units.

A statistically significant difference was found in terms of the inability to communicate scores according to the unit of the employees (Table 4, $\chi2=17.624$; p=0.003). A significant difference was found between those working in surgical units and those working in the emergency room as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Emergency personnel's inability to communicate scores were statistically significantly higher compared to those working in surgical units.

A statistically significant difference was found in terms of losing online connection scores according to the unit of the employees (Table 4, $\chi2=13.728$; p=0.017). A significant difference was found between those working in surgical units and those working in COVID-19 and intensive care units as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. COVID-19 and intensive care personnel's losing online connection scores were statistically significantly higher compared to those working in surgical units.

A statistically significant difference was found in terms of Total-NMPQ scores according to the unit of the employees ($\chi2=19.496$; p=0.002). A significant difference was found between those working in surgical units and those working in emergency and intensive care units as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Emergency and intensive care personnel's Total-NMPQ scores were statistically significantly higher compared to those working in surgical units.

A statistically significant difference was found in terms of the inability to access information scores according to the professional experience of the employees (Table 4, $\chi2=14.692$; p=0.001). A significant difference was found between the employees working for <10 and 10-19 years and those working for ≥20 years as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Employees' inability to access information scores for <10 and 10-19 years were statistically significantly higher compared to those working for ≥20 years.

A statistically significant difference was found in terms of Total-NMPQ scores according to the professional experience of the employees (Table 4, $\chi2=6.551$; p=0.038). A significant difference was found between the employees working for 10-19 years and those

working for ≥20 years as a result of the Bonferroni-corrected pairwise comparisons made to determine from which group the significant difference originated. Employees' Total-NMPQ scores for 10-19 years were statistically significantly higher compared to those working for ≥20 years.

A positive, very weak, and statistically significant correlation was found between the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and total nomophobia scores and the work stress scale (Table 5, $p<0.05$). As the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and the Total-NMPQ scores increase, the work stress scale scores will also increase. Likewise, as the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and the Total-NMPQ scores decrease, the work stress scale scores will also decrease.

DISCUSSION

Women's work stress scale scores were statistically significantly higher compared to men in our study. In a study conducted by Tuna with oncology nurses, they stated that women experience more intense work stress compared to men (17).

Nurses' and midwives' work stress scale scores were statistically significantly higher compared to other healthcare personnel. ICN emphasized that nursing is a difficult profession and work-related stresses are more common among nurses compared to other professionals (18). It was found among the healthcare professionals that the most work stress was experienced by nurses. It was also concluded that the nursing profession is difficult and professional stress is common among nurses (19, 20).

Work stress scale scores of employees for 10-19 years are statistically significantly higher compared to those of employees for <10 years. It is compatible with the studies that found that healthcare professionals experience more and more work stress over the years in the profession (17, 21).

Those aged ≤30 and 31-35 years had statistically significantly higher inability to access information scores compared to those aged >40 years. There is an inversely significant relationship between age and nomophobia according to the study conducted by Erdem et al. (2017) (22). Younger individuals were found to be more likely to exhibit such behaviors in a study on problematic mobile phone usage behavior (23).

Single people's inability to access information, waiving comfort, and losing connection scores and Total-NMPQ score were statistically significantly higher compared to married people. It was observed that the profiles of adult individuals with a high tendency to nomophobia consisted of single individuals, those without children, and those with high social media addiction scores as a result of a profile study (24).

Postgraduates' inability to access information scores were statistically significantly higher compared to high school graduates and those who had a bachelor's degree. Nomophobia was more common in students with higher education status according to the results of the study (25).

Midwives' inability to access information, waiving comfort, losing online connection, and total-NMPQ scores were significantly lower compared to other healthcare personnel. There are no studies on this result in the literature.

The consistent behavior of continuous use and checking of smartphone applications is particularly interesting. This causes problems in users such as anxiety, stress, sleep disorders, decreased physical activity, decreased academic performance, and impaired well-being (26, 27).

Emergency and intensive care personnel's inability to access information and Total-NMPQ scores were statistically significantly higher compared to those working in surgical units. Emergency personnel's inability to communicate scores were statistically significantly higher compared to those working in surgical units. The mobile phone creates a distraction in healthcare personnel, which can cause them to be unable to remember important information and lack of attention, as well as threatening patient safety, privacy, and the security of personal data and disrupting communication between the patient and the personnel (28). It was found that 78.1% of nurses working in hospitals mostly use mobile devices for searching and messaging with their families or friends while at work (29).

Employees' inability to access information scores and Total NMPQ scores for <10 and 10-19 years were statistically significantly higher compared to those working for ≥20 years. It is the young age group that is nomophobic with 77% (18-24) and the 25-34 age group ranks second with 68% according to age. The fact that the third most nomophobic is 55 and above

shows that nomophobia is not only an addiction affecting adolescents but also an addiction affecting adults (30).

COVID-19 and intensive care personnel's losing online connection scores were statistically significantly higher compared to those working in surgical units.

Intensive care personnel's waiving comfort scores were statistically significantly higher compared to those working in surgical and internal units.

The COVID-19 process and fear have been shown to increase work stress and workload as well as negative effects on physical, mental, and emotional difficulties, stress, anxiety, work-family conflict, and substance abuse in healthcare professionals. Therefore, healthcare professionals' efforts and energy to eliminate work stress in this process can cause emotional exhaustion while performing their duties (31, 32, 33). Phone use may be increased due to stress and emotional exhaustion.

Using a mobile phone in the classroom environment has been the cause of the distraction complaint for both the user and other people sharing the same environment as stated in many studies (34, 35, 36). Even phone notifications have been observed to reduce performance in performing an important task (37). It should be kept in mind that those who spend too much time with their mobile device in the working environment may distract other colleagues and more studies should be carried out on technology addiction.

As the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and the Total-NMPQ scores increase, the work stress scale scores will also increase. Likewise, as the Nomophobia Questionnaire waiving comfort, not being able to communicate, losing online connection, and the Total-NMPQ scores decrease, the work stress scale scores will also decrease.

Continuously checking or using smartphones, checking text messages or emails, connecting to social networks, and browsing the Internet may cause sleep disorders, stress, anxiety, reduced physical activity and decreased academic performance (38).

Stress and panic were associated with phone deprivation if smartphones were kept away in another study (39).

CONCLUSION

The results of this study show that there are nomophobia and work stress in healthcare personnel and there is a directly proportional relationship between nomophobia and work stress. In-service training and support can be provided to healthcare personnel on addiction and stress.

It has to be ensured that negative conditions in hospitals are eliminated, positive working environments that reduce work stress are increased, and thus they have the most appropriate working conditions for employees in order for healthcare professionals not to experience work stress.

It can be ensured with the improvements and interventions expected to take place that healthcare personnel overcomes these stressful situations with the least damage. We think that it would be appropriate to conduct similar studies on larger samples in order to ensure appropriate conditions for healthcare professionals.

Mobile devices may become a problem and addiction when they are not controlled. It is thought that healthcare personnel, who are especially important for human health, are careful and role models in using mobile phones.

Further research on technology addiction and work stress issues should be carried out, their effects on business life, and appropriate measures to cope with these problems should be investigated and put forward.

The study has limitations although there are some important results. These were performed only on healthcare personnel working in a public hospital, and the results obtained are limited within the framework of the participants in which the research was conducted.

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