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DETERMINATION OF ATTITUDE AND STRESS LEVELS OF MIDWIVES, NURSES AND PHYSICIANS WORKING IN OBSTETRICS AND GYNECOLOGY CLINICS REGARDING COVID-19 PANDEMIC

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SUMMARY

Background: *This study aimed to determine the attitude and stress levels of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic.*

Subjects and methods: *This descriptive and cross-sectional study was conducted with 134 healthcare workers in obstetrics and gynecology clinics. The Personal Information Form, the Attitude form for the COVID-19 pandemic and the Perceived Stress Scale were used for collecting the data.*

Results: *It was found that the total average score of the healthcare workers' attitude scale was 55.61±5.97. The total score average of healthcare workers on the perceived stress scale was found to be 28.28±7.43.*

Conclusion: *It was determined that the attitudes of healthcare professionals towards the COVID-19 pandemic and the perceived stress for the COVID-19 pandemic were at moderate levels.*

Key words: *COVID-19 - perceived stress – attitude - obstetrics and gynecology*

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INTRODUCTION

The new type of coronavirus disease (Coronavirus Disease-2019; COVID-19) first appeared in December 2019 in people who were reported to be linked to the seafood market in Wuhan City, Hubei Province, China, with symptoms such as fever, cough, and difficulty in breathing (Adhikari et al. 2020, Abolfotouh et al. 2020). First of all, the virus, which emerged in China, started to spread rapidly all over the world in a short time and the World Health Organization declared this situation as a pandemic on March 11, 2020 (WHO 2020). The World Health Organization reported that 81,947,503 people worldwide were infected with COVID-19 and 1,808,041 people died until January 1, 2021 (WHO 2021). In Turkey 2,220,855 people were infected with the COVID-19 and 21,093 people have reportedly lost their lives until January 1, 2021 (Republic of Turkey Ministry of Health 2021).

In the COVID-19 pandemic, healthcare professionals are the most risky occupational group in terms of encountering an infectious agent. It is an important issue that healthcare workers, who have a key role in pandemic control, are at risk in the COVID-19 outbreak. For this reason, it will be effective for health workers to develop positive attitudes and behaviors such as hand washing, wearing personal protective clothing, and the use of face masks to reduce and prevent the spread of the pandemic (Zhang M et al. 2020, Saqlain et al. 2020).

According to the available data on the COVID-19 pandemic, it is known that some individuals can experience the period of the disease asymptomatically, so they can transmit the disease before the symptoms start to appear (Akpınar & Üstün 2020). Especially the healthcare professionals working in the field of obstetrics and gynecology are at high risk of being infected because they are in close contact with patients both during the surgery, inpatient and outpatient clinic services and in the obstetrics unit (Palatnik & McIntosh 2020). In this process, there is a risk that healthcare workers who are going through the COVID-19 asymptomatically and do not take appropriate preventive measures can infect the pregnant women and gynecology patients with the disease (Akpınar & Üstün 2020).

The fact that healthcare professionals are in close contact with patients during the pandemic, long working hours, the concern of being infected with the new type of coronavirus, uncertainties regarding the pandemic process and increased workload expose the healthcare professionals to stress (Shechter et al. 2020, Polat & Coşkun 2020).

In the literature, in the studies examining the psychological status of the healthcare workers towards the COVID-19 pandemic, it has been reported that the epidemic is associated with the increased stress, depression, burnout and fear in healthcare professionals (Shechter et al. 2020, Murat et al. 2020, Yörük & Güler 2020, Mosolova et al. 2020).

In a study conducted in Turkey, it was reported that approximately one-third of midwives and nurses had symptoms of depression during the COVID-19 pandemic depression (Yörük & Güler 2020). In another study, it was reported that more than 50% of the healthcare workers experienced acute stress (Shechter et al. 2020).

In the study of Wu et al., it was reported that the healthcare workers located near Wuhan region have higher levels of psychological stress compared to the other regions (Wu et al. 2020). In the study of Bohlken et al., it was reported that the severity of psychological symptoms in healthcare workers was affected by age, gender, occupation, specialization, types of activity and proximity to the COVID-19 patients (Bohlken et al. 2020).

Determining the stress levels of healthcare workers is essential for developing appropriate coping methods because of their important role in pandemic control and being among the risky occupational groups (Wu et al. 2020, Bohlken et al. 2020). By determining the attitude levels of healthcare professionals towards the COVID-19 pandemic, possible risk factors can be reduced, appropriate strategies for the control of the pandemic can be developed, and the content and scope of the trainings provided for the healthcare professionals can be regulated (Zhang M et al. 2020).

When the literature was reviewed, although there were studies that determine the knowledge, attitude and stress levels of healthcare workers regarding the COVID-19 pandemic, among these studies, no study was found on healthcare workers working in gynecology and obstetrics clinics, including both midwives and nurses and physicians (Zhang M et al. 2020, Saqlain et al. 2020, Murat et al. 2020, Yörük & Güler 2020, Wu et al. 2020).

It is thought that determining the attitude levels of midwives, nurses and physicians working in the field of gynecology and obstetrics towards the COVID-19 pandemic will be beneficial in the effective management of the epidemic. Assessment of the stress levels of midwives and physicians working in the field of gynecology and obstetrics against the COVID-19 pandemic will be a guide for the future studies and initiatives in terms of developing the methods of coping with stress for healthcare workers.

In this context, the aim of our study is to determine the attitude and stress levels of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic.

Research Questions

- What are the attitudes of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic?
- What are the stress levels of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic?

SUBJECTS AND METHODS

Study Design and Participants

This study was planned as a cross-sectional study to determine the attitude and stress levels of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic. The data of the study was collected between June and August 2020 at the university education and research hospital gynecology and obstetrics clinic and polyclinics. The universe of the research consists of 162 midwives, nurses and physicians working in the delivery room, inpatient and outpatient gynecology and obstetrics clinics of a state hospital. It was aimed to reach the entire universe without choosing the sample. However, the sample consisted of 134 (82.7%) healthcare workers, as midwives, nurses and physicians were on leave or on a medical report and did not agree to participate in the study.

Measurements

The Personal Information Form, the Attitude Form for the COVID-19 pandemic and Perceived Stress Scale were used for collecting the data.

The Personal information form

This is a form consisting of questions including the demographic and occupational data of healthcare professionals (age, gender, title, working year, etc.) and their views towards the COVID-19 pandemic.

The Attitude form for the COVID-19 pandemic

It has been prepared by taking into account the 14 rules regarding the COVID-19 pandemic determined by the Ministry of Health, which includes the attitudes and behaviors of healthcare professionals towards the COVID-19 pandemic (Republic of Turkey Ministry of Health 2020). This form was prepared in five-point Likert type, and it consists of 13 questions. Healthcare professionals were asked to mark the most appropriate answer to the questions (never, rarely, sometimes, often and always). Each question in the questionnaire is scored between 1 and 5 points (never = 1 point, always = 5 points). The lowest score to be obtained from the survey is 10, and the highest score is 65. High scores from attitude questions were interpreted as the participants' high positive attitude towards COVID-19.

The Perceived Stress Scale

Cohen, Kamarck and Mermelstein, that was developed the scale in 1983, which was adapted to Turkish by Eskin et al., the Perceived Stress Scale were used in this study (Cohen et al. 1983, Eskin et al. 2013). The perceived stress scale, consisting of 14 items, was designed to measure how stressful people perceive situations in their lives. The participants evaluate each item on a 5-point Likert-type scale ranging from "never

(0)" to "very often (5)". Seven items that contain positive statements are scored in reverse. While the scores of the perceived stress scale range between 0 and 56, a high score indicates a person's excessive perception of stress (Eskin et al. 2013). In the original scale, the internal consistency coefficient of the scale was determined as 0.84, and in this study, the Cronbach's Alpha coefficient was determined as 0.85.

Statistical Analysis

SPSS 20 package program was used for the statistical evaluation of the data in the study (SPSS Inc, Chicago, Illinois, USA). Categorical variables such as demographic data and descriptive characteristics of the participants were summarized as number (n) and percentage (%). Descriptive statistics for continuous variables were shown as mean±standard deviation. Student's t test was used for the comparison of the means of two groups, and the One Way Anova was used for three group comparisons. The value of $p<0.05$ was taken as the statistical significance level.

Ethical Considerations

When starting the study, approval was obtained from the Ministry of Health's COVID-19 Scientific Research Evaluation Commission to start the study. Ethics committee approval was received from the State Training and Research Hospital Clinical Research Ethics Committee (Decision number: 951, Date: 17.06.2020). Scientific work permit was also obtained from the Provincial Directorate of Health in order to carry out the research in the specified hospital. The verbal consents were obtained from the healthcare professionals who agreed to participate in the study.

RESULTS

The findings given below were obtained in the study conducted to determine the attitude and stress levels of midwives, nurses and physicians working in gynecology and obstetrics clinics towards the COVID-19 pandemic.

The descriptive characteristics of healthcare workers were shown in Table 1. The average age of healthcare workers was 34.94±8.32, 82.1% were women, 56% were undergraduate, 61.2% were married, 89.6% were living in a nuclear family, and 59.7% had children. The average working years of healthcare workers in the profession was 11.63±9.25, and the average of the weekly working hours was 58.84±24.87. 47% of the healthcare professionals were midwives, 32.8% were physicians, and 20.1% were nurses (Table 1).

The responses of participants towards the COVID-19 outbreak were shown in Table 1. Of the healthcare professionals, 53% worked in the field of COVID-19, 65.7% followed the COVID-19 suspected patients, 44%

Table 1. Distribution of Descriptive Characteristics of Healthcare Professionals

Descriptive Features (n=135)	X±SD	
Age	34.94±8.32	
Total working years in the profession	11.63±9.25	
Average working hours per week	58.84±24.87	
	Number	%
Gender		
Male	24	17.9
Woman	110	82.1
Education Status		
High school graduate	7	5.2
Associate Degree	12	9.0
Undergraduate	75	56
Postgraduate (msc and phd)	40	29
Marital status		
Single	52	38.8
The married	82	61.2
Family Type		
Nuclear family	120	89.6
Extended family	14	10.4
Have children		
Yes	80	59.7
No	54	40.3
Title		
Midwife	63	47.0
Nurse	27	20.1
Physician	44	32.8
Employment status in the COVID-19 field		
Yes	71	53
No	63	47
COVID-19 suspected case follow-up		
Yes	88	65.7
No	46	34.3
COVID-19 positive case follow-up		
Yes	59	44
No	75	56
Thought of having enough information about COVID-19	94	70.1
Yes	40	29.9
No		
Information source for COVID-19		
Ministry of Health	117	87.3
Clinical guidelines	81	60.4
Media	60	44.8
Scientific articles	45	33.6
Other	9	6.7
Thought to take adequate precautions against COVID-19		
Yes	86	64.2
No	48	35.8
Worry of getting COVID-19		
Yes	105	78.4
No	29	21.6
Concern about transmitting COVID-19 to family members		
Yes	124	92.5
No	10	7.5

followed the COVID-19 positive patients, 70.1% had sufficient information about COVID-19 87.3% thought that the source of information on COVID-19 is the ministry of health, 64.2% thought the measures they have taken against COVID-19 are sufficient, 78.4% were worried about infected with COVID-19, 92.5% has been found to be concerned about infecting their family members with a new type of coronavirus (Table 1).

Healthcare workers show the best attitude towards the COVID-19 pandemic: "When coughing and sneezing, I cover my mouth and nose with tissue paper or the inside of my elbow" (79.9%), "If I have to leave the house, I wear a mask" (75.4%), "I wash my hands with soap and water for at least 20 seconds"(68.7%).

The items that healthcare professionals have difficulty in displaying a good attitude are "I do not accept visitors during my stay at home" and "I do not go out except in compulsory situations, I isolate myself at home" (Table 2).

It was found that the average score of the healthcare workers' attitude scale was 55.61±5.97. It has been determined that the attitudes of healthcare professionals towards the COVID-19 pandemic are at a moderate level (Table 3).

Table 3 contains the means and standard deviations obtained from the perceived stress scale. The total score average of healthcare workers on the perceived stress scale was found to be 28.28±7.43. According to this finding, it was determined that the midwives, nurses and physicians had a moderate level of stress towards the COVID-19 pandemic.

Table 5 presents the comparison of the perceived stress scale (PSS), the mean score of the scale with the descriptive characteristics of the participants and the responses given to the COVID-19 pandemic. With the average PSS scores of Healthcare Professionals, marital status, family type, the satatus of having children, working status in the field of COVID-19, follow-up of suspected and positive patients for COVID-19, the idea of having sufficient information about COVID-19, no significant difference was found between them in terms of taking adequate precautions ($p>0.05$).

According to the PSS scores of the participants, it was determined that there is a significant difference in terms of gender, educational status, title, fear of catching COVID-19, and the idea of transmitting a new type of coronavirus to family members ($p<0.05$).

It was found that the healthcare workers who were high school graduates perceived significantly more stress than the others (34.0±8.21). It was determined that the healthcare professionals with postgraduate education experienced the lowest level of stress compared to the other participants (25.9±7.43). It was determined that the healthcare workers who were worried about catching COVID-19 and were worried about transmitting a new type of coronavirus to their family members perceived significantly more stress than the other healthcare workers ($p <0.05$).

Table 2. The Attitudes of Healthcare Professionals Towards the COVID-19 Pandemic

Attitude assessment statements against the COVID-19 pandemic	Never %	Rarely %	Sometimes %	Often %	Always %
I do not go out except in compulsory situations, I isolate myself at home	3.7	7.5	24.6	39.6	24.6
I do not accept visitors during my stay at home	7.5	12.7	31.3	30.6	17.9
I ventilate my room often	-	1.5	6.7	32.1	59.7
I avoid contact with people, especially the elderly and those with chronic illnesses	-	3.7	6.0	35.8	54.5
I take care to keep a distance from people	-	0.7	9.7	32.1	57.5
I wash my hands with soap and water for at least 20 seconds	-	-	6.0	25.4	68.7
I clean frequently used surfaces such as door handles, fixtures, sinks every day.	-	8.2	20.9	38.1	32.8
I avoid sharing personal items such as towels	0.7	-	6.0	30.6	62.7
I wash my clothes at 60-90 degrees with normal detergent	0.7	1.5	16.4	28.4	53
I pay attention to drinking plenty of fluids, eating a balanced diet and sleeping patterns.	3.7	10.4	20.1	30.6	35.1
I wear a mask if I have to leave the house	-	1.5	4.5	18.7	75.4
I cover my mouth and nose with tissue or the inside of my elbow when coughing and sneezing	-	0.7	3.0	16.4	79.9
I avoid touching my mouth, nose and eyes with my hands	1.5	1.5	6.7	35.1	55.2

Table 3. Distribution of Health Workers' Attitude Score Averages Towards the COVID-19 Pandemic

Attitude statements	Can be taken Min-Max Points	Received Min-Max Points	X±SD
Total Score	13-65	36-65	55.61±5.97

Table 4. Distribution of the Average Scores that the Healthcare Professionals Got from the Perceived Stress Scale

Perceived Stress Scale	Can be taken Min-Max Points	Received Min-Max Points	X±SD
Total Score	0-56	2-46	28.28±7.43

Table 5. Distribution of Health Care Professionals' Average Scores Obtained from the Perceived Stress Scale of the Descriptive Features

Descriptive Features (n=135)	Scale total score X ± SD	Test	P Value
Gender		t:-2.003	0.055
Male	24.9±9.64		
Woman	29.0±6.68		
Education Status		F:3.984	0.009
High school graduate	34.0±8.21*		
Associate Degree	32.0±6.09		
Undergraduate	28.4±6.37		
Postgraduate	25.9±7.43*		
Marital status		t:0.015	0.988
Single	28.29±6.69		
The married	28.27±7.90		
Family Type		t:-0.650	0.517
Nuclear family	28.13±7.51		
Extended family	29.50±6.82		
Have children		t:0.281	0.779
Yes	28.43±7.93		
No	28.06±6.68		
Title		F:4.429	0.014
Midwife	29.21±6.48		
Nurse	30.33±7.06		
Physician	25.68±8.32		
Employment status in the COVID-19 field		t:0.969	0.334
Yes	27.69±8.10		
No	28.94±6.59		
COVID-19 suspected case follow-up		t:-0.349	0.728
Yes	28.11±7.95		
No	28.58±6.39		
COVID-19 positive case follow-up		t:-0.991	0.324
Yes	27.56±8.42		
No	28.84±6.54		
Thought of having enough information about COVID-19		t:-0.734	0.464
Yes	27.97±7.67		
No	29.00±6.88		
Thought to take adequate precautions against COVID-19		t:-1.332	0.185
Yes	27.64±7.74		
No	29.42±6.76		
Worry of getting COVID-19		t:2.415	0.017
Yes	29.08±7.20		
No	25.38±7.64		
Concern about transmitting COVID-19 to family members		t:2.188	0.030
Yes	28.67±7.23		
No	23.40±8.50		

DISCUSSION

The rapid spread of COVID-19 globally brought the idea that there is no safe place anywhere in the world, it negatively affected the mental health of people and changed their attitudes (Yamaguchi & Takebayashi 2020, Zhang WR et al. 2020). Zhang et al. found risk factors for developing symptoms such as, high prevalence rates of severe insomnia, fear, depression, somatization, and obsessive-compulsive behaviours on

the healthcare workers (Zhang WR et al. 2020). The healthcare workers are considered to be the occupational group with the highest risk for SARS-CoV-2 (COVID-19) exposure (HASUDER 2020). Since the healthcare professionals do not know whether the patient they are in close contact with has COVID-19, they are very likely to be infected. This situation causes stress on the healthcare workers. For this reason, it is important to determine the attitudes and stress levels of healthcare professionals towards the pandemic.

The most positive attitudes in the present study can be listed as the mask use, hand washing, covering the mouth and nose while coughing and sneezing. In a cross-sectional study on healthcare professionals in Nigeria, most of the participants stated that covering the mouth and nose properly when coughing and sneezing can reduce the risk of infection (Enenche Ejeh et al. 2020). In the same study, it was found that the practice of wearing a face mask when leaving the house was weak among the healthcare workers (Enenche Ejeh et al. 2020). Jawed et al. stated that the healthcare professionals in Pakistan showed the best practice in the mask use and that about 90% of healthcare professionals wear masks while they are in contact with the patient (Jawed et al. 2020). In a study conducted on the healthcare workers working in obstetrics clinics in Germany, it was reported that the healthcare workers exhibited positive hand hygiene behaviors to prevent the spread of infection in the COVID-19 pandemic, similar to our findings (Derksen et al. 2020).

In the present study, it was determined that the attitudes of healthcare professionals towards the COVID-19 pandemic were at moderate levels. In the study conducted by Zhang et al. (2020) on the healthcare professionals in China, it was determined that 89% had sufficient knowledge, and 90% showed the appropriate behaviors (Zhang M et al. 2020). In a study conducted on the nurses in Saudi Arabia, it was reported that the nurses had a positive attitude during the COVID-19 pandemic (Al-Dossary et al. 2020). Many studies have showed that the knowledge, attitudes and behaviors of healthcare professionals towards COVID-19 are at moderate levels (Saqlain et al. 2020, Enenche Ejeh et al. 2020, Jawed et al. 2020, Al-Dossary et al. 2020). The fact that the healthcare professionals have professional knowledge such as individual hygiene, effective hand washing, protection from infectious diseases, antisepsis and disinfection may be the reason for their positive attitudes towards the pandemic.

In the current study, the total score average of the perceived stress scale of midwives, nurses and physicians was found to be 28.28±7.43. This result showed that the midwives, nurses and physicians perceive moderate stress towards the COVID-19. In a study conducted on healthcare workers during the COVID-19 pandemic in Spain, the perceived stress scale mean score was found to be 29.3±5.8. This result is similar to our study findings (Ruiz-Fernández et al. 2020). In the previous studies examining the psychological status of healthcare workers for the global COVID-19 pandemic, it was reported that the pandemic caused an increase in the stress levels of healthcare professionals (Shechter et al. 2020, Murat et al. 2020, Yörük & Güler 2020).

In a study conducted on obstetricians in Turkey, it was reported that physicians felt anxious while treating COVID-19 positive patients, most of the physicians were afraid of getting sick during this period and sometimes felt hopeless. It has been concluded that the COVID-19 pandemic in Turkey is a stressful and worrying period for the obstetricians (Yalçın Bahat et al. 2020).

In our study, it was determined that there is a significant difference in terms of gender, educational status, title, fear of getting the COVID-19 and the fear of infecting family members with a new type of coronavirus according to the PSS scores of the participants ($p<0.05$). In our study, it was determined that the mean PSS scores of women were higher. In a study conducted with healthcare professionals in Spain, it was found that women got higher scores on the stress scale similar to our findings (Ruiz-Fernández et al. 2020). In the study of Babore et al. (Italy), women were reported to have higher stress levels (Babore et al. 2020). Similarly, another study found that anxiety scores were higher in women (Usul et al. 2020). It is thought that women experience more stress than men due to the obligations of home and work life and gender roles.

In our study, it was determined that there was a significant difference in the PSS scores of the participants according to their titles. Shen et al. (2020) found that nurses experienced stress and anxiety under intense pressure in their study examining the psychological problems experienced by nurses during the COVID-19 process (Shen et al. 2020). It was determined that the nurses average stress level was higher than other the occupational groups (Göksu & Kumcağız, 2020). In a study conducted in Spain, stress level scores were found to be similar for both the nurses and physicians (Ruiz-Fernández et al. 2020). It is thought that this result is due to the fact that nurses and midwives spend more time with patients.

In the current study, it was determined that the PSS score averages of the healthcare workers who are worried about getting COVID-19 and who are worried about transmitting COVID-19 to their family members are higher. Similarly, Murat et al. reported in their study that most of the participants (86%) were concerned about infecting their family members with the coronavirus, and that the participants had the fear of getting coronavirus and experiencing psychological problems in the COVID-19 pandemic (Murat et al. 2020). In a study conducted in New York, it was reported that the

healthcare workers were concerned about transmitting COVID-19 to their relatives, and this situation caused sadness (Shechter et al. 2020). In another study, it was reported that the healthcare workers were concerned about transmitting the infection to their family members (Usul et al. 2020). It is quite possible for healthcare professionals to have fears of transmitting COVID-19 to the family members during the process.

Limitations of the study

The fact that our study was conducted in a single center is the limitation of our study.

CONCLUSION

In the current paper, it was determined that the attitudes of healthcare professionals towards the COVID-19 pandemic were at moderate levels, and they had moderate stress levels towards the COVID-19 pandemic.

It is considered appropriate to continue to evaluate the attitudes of health workers towards the pandemic and to provide in-service trainings for the continuity of their positive attitudes during the pandemic process. In addition, it is recommended to evaluate the stress levels of health workers due to the pandemic and to provide psychological support for them.

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Contribution of individual authors:

Hakan Nazik & Evşen Nazik: study design, first draft, statistical analysis.

Zehra Çerçer & Ezgi Aygün: study design, data collection, first draft.

Funda Özdemir: Study design, first draft.

All authors have read and approved the last article.

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