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ORIGINAL ARTICLE / ARAŞTIRMA YAZISI

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Covid-19 Phobia Among Pandemic Hospital Staff: A Cross-Sectional Design

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ABSTRACT

Purpose: To determine factors related to Covid-19 phobia in pandemic hospital staff during the pandemic.

Methods: 361 staff were assessed between 2020-07-14 and 2020-10-15. A form consisting of 28 queries and the Covid-19 Phobia-Scale (C19P-S) were administered to determine sociodemographic; working and living conditions.

Results: Participants' mean age was 39.82±7.37, 69.8% were female, 14.4% were physicians, 41.6% were nurses, 8% were other health care staff, and 36% were other personnel. The C19P-S scores were higher among women, those whose monthly income is lower than their expense, those who live ≥4 people in household, those who have a chronic illness, those on whose working conditions pandemic has a large and extreme impact, the Y State Hospital staff, those who house in another place other than their home for quarantine, and in those who have patients with Covid-19 among family, relatives or neighbours.

Conclusion: Re-planning the intense and high-risk working order, providing suitable conditions, and making plans for employees with limited work experience in outbreaks, and addressing the impact of the pandemic on the family and social lives of PH staff can reduce the negative psychological effects of the pandemic.

Keywords: Pandemics, medical staff, Covid-19, phobia

Pandemi Hastanesinde Çalışanlarda Covid-19 Fobisi: Kesitsel Çalışma

ÖZET

Amaç: Bu araştırmanın amacı pandemi hastanesinde çalışanlarda pandemi sürecinde Covid-19 fobisine ilişkin faktörleri belirlemektir.

Yöntem: Araştırma, 14.07.2020 ile 15.10.2020 tarihleri arasında 361 sağlık çalışanı ile gerçekleştirildi. Veriler, sosyodemografik özellikleri, çalışma ve yaşam koşullarını belirlemek için 28 soruluk bir form ve Covid-19 Fobi Ölçeği (C19P-S) ile toplandı.

Bulgular: Katılımcıların yaş ortalaması 39.82±7.37 olup, %69.8'i kadın, %14.4'ü doktor, %41.6'sı hemşire, %8'i diğer sağlık personeli ve %36'sı diğer personeldir. C19P-S puanları kadınlarda, aylık geliri giderinden düşük olanlarda, hanede ≥4 kişiden fazla yaşayanlarda, kronik hastalığı olanlarda, pandeminin çalışma koşulları üzerinde büyük ve aşırı etkisi olanlarda, Y Devlet Hastanesi personelinde, karantina için evi dışında başka bir yerde ikamet edenler ile aile, akraba veya komşuları arasında Covid-19 hastası bulunanlarda daha yüksek bulunmuştur.

Sonuç: Yoğun ve yüksek riskli çalışma düzeninin yeniden planlanması, uygun koşulların sağlanması, salgınlarda iş deneyimi az olan çalışanlar için planlama yapılması ve salgının pandemi hastanesi personelinin aile ve sosyal yaşamları üzerindeki etkisinin ele alınması olumsuz psikolojik etkileri azaltabilir.

Anahtar kelimeler: Pandemik, sağlık çalışanları, Covid-19, fobi

Coronavirus Disease (Covid-19) is a virus infection identified for the first time on 2020-01-13 because of research on a group of patients who developed respiratory symptoms such as fever, cough, and shortness of breath in Wuhan Province in December 2019 (1,2). People aged≥60, those with chronic illness, and healthcare workers are the individuals most affected by the disease (3,4).

Epidemic diseases, which are among the crises impacting health institutions and employees, create the risk and fear of contamination that may impair the physical and mental well-being of staff. One of six healthcare professionals serving patients during epidemics manifests signs of severe stress during or after the epidemic (5,6). Besides burnout syndrome, adjustment disorder, trauma-related stress disorder (7,8,9), it's necessary to determine the fear of Covid-19 transmission and related risk factors, which can reach the level of coronaphobia (C19P) (10). Likewise, it was challenging for hospital staff to cope with C19P as they cannot avoid the coronavirus, which is common in society and work environments.

The studies investigated C19P among healthcare professionals. First, Coronavirus Anxiety Scale-Healthcare version (CAS-HC) was administered to 231 healthcare professionals in Mexico (11). Those working in emergency rooms, triage, and ICUs exhibited high CAS-HC scores. Over 1/3 of the participants scored in the clinical range on this measure. Second, 736 nurses working in Covid-19 designated hospitals and public health units were investigated in Philippines (12). C19P is found to be prevalent among frontline Filipino nurses (54.76%); 37.04% in hospital nurses and 70.91% in public health nurses. Additionally, nurses' gender, marital status, job status and personal resilience were identified as predictors of Covid-19 anxiety. Third, Enea et al. (2021) reported that, obsession with Covid-19 and C19P mediated the relationship of death anxiety with burnout in ICU specialists facing the Covid-19 outbreak. Most of their participants reported higher levels of death anxiety compared with the general population and nurses reported higher levels of death anxiety than physicians (13). Asghar et al. (2021) reported that, depersonalization, emotional exhaustion, and low personal accomplishment were associated significantly with a history of Covid-19 infection and Covid-19 postings (14).

On this basis, we investigated the relationship between C19P and the living and working conditions of PH staff during the epidemic. We hypothesized that H1: There is a significant correlation between C19P and age; H2: Females show higher C19P-scores compared to males; H3: C19P-scoresare higher in participants living in crowded house, compared to others; H4: C19P-scores are higher in participants having children with whom they live in the same house compared to others; H5: Participants having chronic illness show higher C19P-scores; H6: C19P-scores are higher in participants behaving sensitively for not to infect people, especially the household.

Material and Methods

Participants and Procedure

A total of 361-volunteers working in University of Health Science (UHS) X Training and Research Hospital (TRH), Y-State Hospital (SH), and Y1, Y2, Y3 and Y4-SH were included in the study (Table-1). First, the online questionnaire link was sent to the hospital administrators. Then, the link was shared within hospital staff via mobile phone communication application. The data were collected between 2020-06-14 and 2020-10-15. Inclusion criteria were working in any department of the PH and volunteering to participate in research. To reach the whole population, two reminders were made, and the participation was tried to be increased. Written informed consent was obtained.

Measures

We developed *The Information Form*, consisting of 28 questions to determine the sociodemographic characteristics, working conditions, some issues related to Covid-19.

Covid-19 Phobia Scale (C19P-S) is a 20-item, 5-likert-type, developed to measure the phobia that can occur because of coronavirus. Items are rated as "1-Strongly disagree; 5-Strongly agree". Items 1,5,9,13,17,20 measure Psychological Sub-Scale; 2,6,10,14,18 measure Somatic Sub-Scale; 3,7,11,15,19 measure Social Sub-Scale; 4,8,12,16 measure Economic Sub-Scale. The total score ranges from 20 to 100. Higher scores indicate a higher C19P in the sub-scales and a higher level of general C19P. Cronbach-alpha coefficient of the C19P-S was 0.925 and subscale reliabilities ranged 0.851-0.903 (15). Cronbach-alpha coefficient our study was 0.941 and subscale reliabilities ranged 0.763-0.858.

Data Analysis

The data were analysed with the SPSS 15.0. Descriptive data was expressed as frequency, percentage, and as mean, median. Data were analysed using t-test and one-way ANOVA (Kruskal-Wallis and Mann-Whitney U test when the variables were not normally distributed),

post hoc Tukey HSD test and logistic regression analyses (Backward Wald model, each subscale score was dichotomized from the median and taken into the model). p values of <0.05 were significant.

Results

The age, gender, marital status, and occupation data are in Table 1. The significant correlations between the C19P sub-scale and total scores and the working and living conditions are in Table 2.

Table 1. Socio-demographics

Characteristic		n (%)
Age (Mean±SD)	39.82±7.37	361 (100)
Gender	Female	252 (69.8)
	Male	109 (30.2)
Marriage	Married	268 (74.2)
	Single	60 (16.6)
	Separated+Widow	33 (9.1)
Profession	Physician	52 (14.4)
	Nurse	150 (41.6)
	Other medical staff: Health officer (n=3) + Midwife (3) + Health technician (14) + Laboratory technician (6) + Paramedic/EMT (2) + Biologist (1)	29 (8.0)
	Other staff: Secretary (58) + Caregiver (5) + Security guard (27) + Cleaning staff (40)	130 (36.0)

The following variables had no effect on the C19P-S scores: Age (H1 is not confirmed), marital status, profession, whether or not there are any children with whom they live in the same house (H4 is not confirmed), using or not using the administrative leave in the pandemic; working/not working in the emergency room, triage/outpatient clinic; working/not working in a radiology unit reserved for patients with suspected Covid-19 or definite diagnosis; attending/not attending in a public; compliance/non-compliance with national restrictions on days off duty; having necessary Personal Protective Equipment (PPE) in risky situations in terms of Covid-19, had no impact on C19P-S scores.

Gender, income, number of households, having chronic illness, diagnosed with Covid-19, and having patients with Covid-19 among family, relatives or neighbours predicted the coronaphobia among the pandemic hospital staff (Table 3).

Discussion

In this study, the correlation between C19P in PH staff and the socio-demographic characteristics, working and living conditions were investigated. The discussion will be carried out in variables that have a significant impact on the C19P-S scores and a few exceptional issues will be discussed when necessary.

Age did not affect the C19P-S scores. It was the first time that almost all participants encountered problems caused by a pandemic in biopsychosocial areas. Therefore, problem solving and coping skills, which may be influenced by the advancing age, were not a distinctive factor in the C19P scores during pandemic.

All sub-scale and total scores of the C19P of females are higher than males. C19P can be considered within the scope of specific phobias in the DSM-5 diagnostic system. Specific phobias, which have an incidence rate of 2.7% among the society, are more prevalent among females (3.8%) than males (1.4%). The mean age of specific phobias in community screenings is 37.9 years. The odd of having a comorbid psychiatric disorder is higher in patients with specific phobia, and depression is also detected in 28.6% (4% in population). Specific phobia, and in particular depression, lead to both losses of workforce and impairment in social life (16,17). As with other specific phobias, C19P was higher in females than males among our participants with a mean age of 39.8. Similarly, in the study of Haktanir et al. (2020), females reported much higher levels of coronavirus-related fear than males (18).

All sub-scale and total scores of the C19P of the participants, whose monthly income is lower than their monthly expenses, are higher compared to the others. Psychosocial and Environmental Problems are defined under nine categories in Axis-IV in the DSM-IV's five-axis diagnostic system (19) One of these categories is economic issues. The fact that their income is lower than their expenses is a chronic stress factor that may have led to anxiety and/or depression at threshold or disorder-level among the participants. Higher C19P levels can also be considered in the context of psychiatric comorbidity. However, only the female gender, having less monthly income than expenses, presence of chronic illness, and staying outside the home have an independent impact on the economic sub-scale. All the participants were permanent public hospital staff. Having a regular income and not losing their job due to the pandemic can account for the fact that an increase in the economic sub-scale scores is associated with only four variables. If this study is performed on individuals who have lost jobs and/or income due to the pandemic, it will not be surprising to determine higher scores in the economic sub-scale.

Table 2: Variables associated with covid-19 phobia scores					
Covid-19 Phobia Scale Characteristic (n)	**Psychological**	**Somatic Mean±SD**	**Social**	**Economic**	**Total**
Gender					
Female (252)	21.6±5.3	12.9±4.6	15.9±4.5	9.5±3.2	59.9±15.7
Male (109)	18.6±5.6	10.8±4.1	14.2±4.8	8.5±3.1	52.2±15.8
p[1]	<.001	<.001	.002	.010	<.001
Perception of Monthly Income-Expense					
income<expense (191)	**21.9±5.4**	**13.1±4.6**	**16.2±4.6**	**9.7±3.2**	**61.0±15.8**
income=expense (124)	19.6±5.2	11.4±4.2	14.7±4.6	8.6±3.0	54.4±15.4
income>expense (46)	18.9±5.7	11.1±4.8	14.2±4.4	8.5±3.1	52.7±16.4
p[2]	<.001	.001	.002	.005	<.001
Number of people living in the household Median (min-max)					
Living alone (18)	18(11-24)	13,5(5-18)	15(8-19)	7,5(4-13)	61(29-69)
2-3 (173)	20(6-30)	11(5-25)	15(5-25)	9(4-19)	53(20-96)
≥4 (170)	**23(6-30)**	**12(5-25)**	**16(5-25)**	9(4-20)	**59(20-99)**
p[3]	.005	.029	.011	.148	.009
Having chronic illness					
Present (125)	22.1±6.0	13.1±5.2	16.5±4.	9.8±3.4	61.5±17.7
None (236)	19.9±5.1	11.7±4.0	14.8±4.4	8.8±3.0	55.2±14.6
p[1]	<.001	.008	.001	.004	.001
Impact of pandemic on working order Median (min-max)					
None+Mild (21)	18 (6-30)	10 (5-22)	13(5-25)	8 (4-20)	49 (20-97)
Moderate (64)	19 (7-28)	10 (5-19)	15(7-24)	8 (4-15)	53 (24-86)
Severe+Extreme (276)	**22 (6-30)**	**12 (5-25)**	**15(5-25)**	**9 (4-19)**	**58 (20-99)**
p[3]	.001	<.001	.005	.110	.002
Hospital of duty					
X UHS XX TRH* (70)a	18.7±5.7	11.3±4.4	14.2±4.5	9.4±3.2	53.6±16.5
Y SH** (68)b	**22.8±5.2**	**13.6±4.9**	**16.2±4.6**	8.8±3.2	**61.3±15.8**
T four districts SH*** (223)c	20.7±5.4	12.1±4.5	15.5±4.7	9.2±3.2	57.6±15.9
p[2]	<.001	.011	.035	.523	.019
Covid-19 service throughout the pandemic (as of March 2020)					
Worked (200)	21.4±5.5	12.8±4.7	15.7±4.5	9.4±3.1	59.3±16.0
Did not work (161)	19.9±5.5	11.5±4.3	14.9±4.8	8.9±3.3	55.3±16.1
p[1]	.016	.005	.139	.211	.019
Employees' stay outside their home for quarantine, considering that they are working in departments at risk for Covid-19					
Accommodated outside home (55)	21.8±5.8	13.1±4.7	16.6±5.0	1.2±3.7	61.7±16.6
Accommodated at home (306)	2.5±5.5	12.1±4.6	15.2±4.6	8.9±3.1	56.7±15.9
p[1]	.117	.104	.028	.009	.032
Having symptoms suggestive of being infected with Covid-19					
Had (131)	22.6±5.5	13.9±4.8	16.9±4.7	1.1±3.5	63.5±16.4
Had not (230)	19.1±4.9	1.7±3.8	14.1±4.1	8.6±2.8	52.6±13.7
p[1]	<.001	<.001	<.001	<.001	<.001
Having any test for Covid-19 diagnosis					
Had (156)	21.4±5.7	13.1±4.8	16.1±4.9	9.7±3.2	6.2±16.6
Had not (205)	2.2±5.5	11.6±4.3	14.9±4.5	8.8±3.2	55.5±15.5
p[1]	.032	.002	.019	.014	.006

Table 2: Variables associated with covid-19 phobia scores

Covid-19 Phobia Scale Characteristic (n)	Psychological	Somatic Mean±SD	Social	Economic	Total
Being diagnosed with Covid-19 Median (min-max)					
Diagnosed (27)	25 (9-30)	14 (6-25)	17(7-25)	10 (4-19)	64 (27-99)
Had not diagnosis (333)	20 (6-30)	11 (5-25)	15(5-25)	9 (4-20)	56 (20-97)
p[4]	.003	.001	.012	.159	.002
Being hospitalized due to Covid-19 Median (min-max)					
Had hospitalization (11)	26 (17-30)	14 (11-25)	19(14-25)	9 (4-19)	67 (52-99)
Had not (350)	20 (6-30)	11 (5-25)	15(5-25)	9 (4-20)	56 (20-97)
p[4]	.004	.008	.012	.648	.011
Having isolation due to being infected with Covid-19					
Had isolation (37)	21.9±6.2	13.6±4.8	16.1±4.9	9.5±3.6	61.2±17.9
Had not (324)	2.6±5.5	12.1±5.5	15.3±4.7	9.1±3.2	57.1±15.2
p[1]	.150	.047	.334	.472	.139
Having Covid-19 patients among the family, relatives, or neighbors					
Had (91)	21.8±5.8	13.2±5.3	16.3±5.2	9.8±3.7	61.1±18.1
Had not (270)	2.4±5.5	11.9±4.3	15.1±4.5	8.9±3.0	56.3±15.2
p[1]	.040	.017	.030	.031	.015

**University of Health Science X Training and Research Hospital, **Y State Hospital, ***Y1, Y2, Y3 and Y4 State Hospital*
[1]p<0.05 in according to independent groups the t-test
[2]p<0.05 one-way analysis of variance (ANOVA), bold character posthoc Tukey HSD p<0.05
[3]p<0.05 Kruskal-Wallis test, bold character Bonferroni correction p<0.016
[4]p<0.05 Mann-Whitney U test

Table 3: Logistic regression explaining the relationship between phobia scores and independent variables

Phobia scale sub-dimension and total	Multiple regression OR value (95%CI)	p
[1]Psychological sub-dimension Nagelkerke R^2=0.19		
Gender (Female)	1.74 (1.06-2.87)	.028
Perception of income	1.64 (1.18-2.27)	.003
Having chronic illness	1.66 (1.03-2.67)	.035
Impact of pandemic on working order	1.47 (1.05-2.17)	.047
Having Covid-19 symptoms	1.88 (1.17-3.03)	.009
Having Covid-19 patients among the family, relatives, or neighbors	1.98 (1.17-3.35)	.010
[2]Somatic sub-dimension Nagelkerke R^2=0.20		
Gender (Female)	1.76 (1.07-2.89)	.025
Perception of income	1.58 (1.14-2.19)	.006
Impact of pandemic on working order	1.62 (1.09-2.40)	.017
Being diagnosed with Covid-19	8.21 (1.83-36.82)	.006
[3]Social sub-dimension Nagelkerke R^2=0.17		
Perception of income	1.69 (1.24-2.32)	.001
Having chronic illness	1.91 (1.17-3.31)	.005
Having Covid-19 patients among the family, relatives, or neighbors	1.97 (1.17-3.31)	.010
[4]Economic sub-dimension Nagelkerke R^2=0.10		
Perception of income	1.79 (1.15-2.79)	.010
Having chronic illness	1.55 (1.14-2.11)	.004

Table 3: Logistic regression explaining the relationship between phobia scores and independent variables

Phobia scale sub-dimension and total	Multiple regression OR value (95%CI)	p
[5]Total score Nagelkerke R^2=0.21		
Gender (Female)	1.97 (1.18-3.28)	.009
Perception of income	1.82 (1.30-2.55)	.000
Number of people living in the household	1.36 (1.08-1.72)	.009
Having chronic illness	1.88 (1.17-3.02)	.008
Being diagnosed with Covid-19	3.33 (1.16-9.60)	.025
Having Covid-19 patients among the family, relatives, or neighbors	2.15 (1.26-3.68)	.005

A. Gender
B. Perception of income
C. Number of people living in the household
D. Having chronic illness
E. Impact of pandemic on working order
F. Hospital of duty
G. Working in Covid-19 service throughout the pandemic
H. Number of Covid-19 patients served per day throughout the pandemic
I. Compliance with rules (wearing masks, social distancing)
J. Staying outside their home for quarantine, due to working in risky departments
K. Having Covid-19 symptoms
L. Having Covid-19 test
M. Being diagnosed with Covid-19
N. Having isolation due to being infected with Covid-19
O. Having Covid-19 patients among the family, relatives, or neighbors

[1]Variables included in the model: A-I, K-M, O
[2]Variables included: A-H, K-O
[3]Variables included: A-F, I-M, O
[4]Variables included: A, B, D, I, J, L
[5]Variables included: A-G, I-L, O

Except for the economic sub-scale, the other sub-scale and total scores were found to be higher among the participants living ≥4 people in their household. As the number of people living in the household increases, it will be difficult to maintain social distance and prevent contact. This situation might be increasing the fear of being infected and transmission as well as C19P-S scores. Milman et al. (2020) also have revealed that as social isolation decreases, negative psychological symptoms related to Covid-19 increase (20). It has been determined that healthcare professionals are highly anxious to infect their family members (21,22). There is also a high likelihood of having elderly people in a crowded household. The news and information that the mortality rates associated with Covid-19 increase significantly every 10 years in individuals ≥20, and that the risk of morbidity-mortality is higher among people ≥60, who are among the most affected by diseases (23), might have increased the C19P anxiety. However, the presence of a child with whom the participant lived in the same house did not affect the C19P-S scores. News and information that Covid-19 is milder in children compared to adults, 30% of the children infected with the virus can overcome it without any symptoms, death rates are lower, supportive treatment approaches are sufficient in many cases (2,24,25), might have prevented the expected increase in C19P anxiety in those living with children.

Increased number of cases and working periods during the pandemics are factors that increase psychological strain. The total, psychological, somatic, and social subscale scores were higher in our participants who reported that their work tempo and hours were 'significantly and excessively' affected during the pandemic. In a study (26) involving healthcare professionals from various parts of the world,73% of nurses and 77% of physicians stated that their working hours and tempo changed 'significantly or very significantly' due to the pandemic. Increasing working hours increases contact with patients, the risk of contamination, protective equipment load, and physical burnout, and this affects the psychological well-being of healthcare workers negatively (5,27).

The total and all subscale scores were higher in patients having chronic illness than those without the illness. In addition to people aged ≥60 and healthcare staff, those with chronic illnesses are stated to be among the individual who has been affected by Covid-19 substantially. News, warnings, and media messages emphasizing that the risk of morbidity-mortality is higher in those with chronic illnesses (1,3,4,23), might go beyond ensuring that employees act cautiously and have led to an increase in C19P-S scores.

The total, psychological, somatic, and social sub-scale scores were higher among the participants who work in Y-SH compared to other hospitals staff. As the Provincial PH, Y-SH started to serve only Covid-19 patients from the very beginning of the pandemic, and providing other health care services were stopped in this hospital. As it is a PH, the workload has increased because of the referral of suspected patients and patients with a definite diagnosis. With a capacity of 400 beds, Y-SH has 109 ICU beds including the tertiary health care services. With the decision taken by the management, personnel working in different departments of the Y-SH were assigned to ICU and Covid-19 services, if necessary. Heavy working conditions, stressful working order, and change in jobs, which are defined under the title of occupational problems within the scope of Psychosocial and Environmental Problems (19) are the problems that also affected our participants. This situation probably manifested itself with an increase in C19P-S scores.

The social and economic sub-scale and the total scores were found to be higher in those who thought they were working in departments at risk in terms of Covid-19 and housed in another place other than their home for quarantine, compared to those who stayed in their home. Those who stay outside of their home for quarantine may be sensitive and fearful of infecting their relatives. This sensitivity might also be associated with an increase in C19P levels. On the other hand, accommodation outside home might have created additional expenditure and increased the economic subscale scores. Röhr et al. (2020) revealed in their systematic review investigating the effects of quarantine measures on healthcare staff during the coronavirus pandemic, quarantine measures were associated with depressive symptoms, anxiety, anger, stress, and loneliness (27).

The total and all subscale scores are higher in our participants who have Covid-19 patients in their family, relatives, or neighbours compared to those who do not. As expected, PH staff will not be able to employ the protective measures they practice in the hospital using PPE during their normal life when they are outside the hospital and are with their relatives. This situation might have increased the risk of transmission and C19P levels if a person in the environment where they live outside the workplace is infected.

No difference was determined between the occupational groups in terms of C19P-S scores. There are Covid-19 patients with a high risk of transmission in every part of the PH, from the entrance door to the ICU. The fact that there is no difference in C19P levels among occupational groups indicate that each occupational group member who performs different duties in different departments of the hospital experiences similar risks and concerns about transmission. The use of additional PPE such as protective clothes and visors in addition to face masks in intensive care and ward conditions where contact duration is longer and risk of contamination is higher, may have prevented the expected increase in C19P levels in those working in these environments that are riskier than other parts of the hospital.

It has been revealed that providing PPE suitable for the risk of virus transmission to which they are exposed increases the sense of safety, mental endurance, and productivity of the staff (6). Almost all our participants stated that the PPE they need was provided. Thus, the potential effect of not providing PPE on phobia scores was not observed. This positive finding shows that the hospital managements participating in the study attach importance to employee safety in terms of contamination risk and take the necessary precautions. This measure probably prevented the increased risk of contamination and C19P while increasing employees' sense of safety, mental endurance, and trust in the organization.

Conclusion

In our study, the factors that have been determined to increase the C19P levels of PH employees including, female gender, having an economic problem, living in a crowded household, having a chronic illness, staying outside their home for quarantine and having an individual among relatives diagnosed with Covid-19 could be guiding in identifying healthcare staff with high risk. Re-planning the intense and high-risk working order, providing suitable conditions, and making plans for employees with limited work experience in outbreaks can reduce the negative psychological effects of the pandemic. The impact of the pandemic on the family and social lives of PH staff is also one of the considerable issues to be addressed, and it is considered that it should be addressed by managers and mental health professionals.

This study has some limitations, including: 1-It's limited to volunteers who use the mobile phone messaging and communication application; 2-Data were collected between July-September 2020, when the number of cases decreased.

Declarations

Ethical Approval

All procedures performed in this study involving human participants were in accordance with the ethical standards of the university Local Ethics Committee of the Medical School (2020-07-22; 20.478.486/472) and the relevant Hospital Chief Physicians have approved the study. All processes of this study were conducted in accordance with the Helsinki Declaration ethical principles.

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Conflict of Interest

The authors declare no conflict of interest.

Availability of Data and Material

All data is available.

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