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THE FEAR OF COVID-19 AMONG HEALTH CARE PROFESSIONALS – A CROSS SECTIONAL STUDY

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STRAH OD KOVIDA 19 MEĐU ZDRAVSTVENIM RADNICIMA – STUDIJA PRESEKA

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ABSTRACT

Objective. Working conditions for health professionals can be affected significantly by pandemic caused by COVID-19. The aims of the study were to identify the level of fear of COVID-19 in hospital staff.

Methods. This study was carried out in a convenience sample of nurses and medical doctors from four public regional hospital in Slovenia. This was a cross-sectional survey study in which a fear of COVID-19 scale (FCV-19s) was used. The questionnaire was completed by 110 participants.

Results: The sample mean score was 16.3±6.1. More than half of the study participants (61%) considered it as low levels of fear, and 39% of the participants considered it as high levels of fear. The employees with less than 27 weeks experience with COVID-19 had a higher mean FCV-19s score (17.6±6.3) than the employees with more than 27 weeks of COVID-19 experience (14.7±5.4) and we found a significant difference of p=0.006. Statistically significant differences were also found between employees regarding COVID-19 units (intensive care unit - ICU and acute unit -AU; item »afraid of losing life«).

Conclusions. Regardless of the duration of the epidemic, fear is still present. Experience reduces fear among employees.

Key words: *COVID-19; fear; health personnel.*

SAŽETAK

Uvod. Pandemija uzrokovana kovidom 19 značajno je uticala na uslove rada zdravstvenih radnika. Cilj istraživanja bio je da se utvrdi koji nivo straha od kovida 19 postoji kod bolničkog osoblja.

Metode. Ova studija je sprovedena na pogodnom uzorku medicinskih sestara i lekara iz četiri državne regionalne bolnice u Sloveniji. U ovoj studiji poprečnog preseka korišćena je Skala straha od kovida 19. Upitnik je popunilo 110 ispitanika.

Rezultati. Prosečni skor na skali bio je 16,3 □ 6. Kod više od polovine ispitanika istraživanja (61%) nivo straha je nizak, a kod 39% njih nivo straha je visok. Zaposleni s manje od 27 nedelja iskustva s kovidom 19 imaju višu srednju vrednost FCV-19s rezultata (17,6 □ 6,3) od onih sa više od 27 nedelja kovid 19 iskustava (14,7 □ 5,4), te je pronađena značajna razlika (p = 0,006). Statistički značajne razlike ponovno su pronađene i među zaposlenima s obzirom na kovid 19 jedinice (Jedinica intenzivne njege – JIN i akutna jedinica – AJ; stavka „strah od gubitka života“).

Zaključak. Bez obzira na trajanje epidemije, strah je i dalje prisutan. Iskustvo smanjuje strah među zaposlenima.

Ključne reči: *kovid 19; strah; zdravstveno osoblje.*

INTRODUCTION

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes severe acute respiratory syndrome, is the source of coronavirus disease 2019 (COVID-19) (1). The total of 261,812,322 people with COVID-19, including 5,209,959 deaths, have been recorded in since December 31, 2019, as of week 2021–47 (2).

Fear is a defense mechanism which contributes to the probability of survival (3). Many factors facilitate fear in COVID-19 pandemic such as possibility of acquiring the infection, the stress about the provision of adequate care, particularly in limited resources, and the concern about family and friend health (4). The rapid increase in morbidity, the lack of protective equipment and long working hours could cause depression and anxiety disturbances and work burnout (5). The researchers showed that the psychological disturbances of nurses were associated with their working performance which could put patients at additional health risk (6-8). Controlling the fear associated with the pandemic is a very important challenge (4). The aims of the study were to identify the level of fear of COVID-19 in hospital staff.

SUBJECTS AND METHODS

This study was carried out on a convenience sample of nurses and medical doctors from four public regional hospitals in Slovenia. Their COVID-19 departments were very similar. This study respected the Declaration of Helsinki (World Medical Association, 2013) with particular emphasis on the anonymisation of the data collected, confidentiality, and non-discrimination of participants. This study was authorised by the Research Ethical Committees of the hospital (Nr.01/3-81/12-21). The data were collected in December 2021 at the fourth peak of the Covid-19 pandemic in Slovenia. The participants completed the questionnaires with a pen. The

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inclusion criteria were to work in a Covid department, and to provide their informed consent to participate. Finally, 110 participants completed the questionnaire with a response rate of around 76%.

The study had a cross-sectional design. The Fear of COVID-19 scale (FCV-19s) was used to evaluate fear from this disease (9). The scale consists of seven items, each with a five-point Likert scale of options. The socio-demographical data were part of the questionnaire. A total score was calculated by summing the total item scores which ranged from 7 to 35. The higher the total score, the higher was the level of the participant/s fear of COVID-19. Classical test theory and Rasch analysis were used for its development. The seven items are as follows:

- I am most afraid of COVID-19.
- It makes me uncomfortable to think about COVID-19.
- My hands become clammy when I think about COVID-19.
- I am afraid of losing my life because of COVID-19.
- When watching news and stories about COVID-19 on social media, I become nervous or anxious.
- I cannot sleep because I am worrying about getting COVID-19.
- My heart races or palpitates when I think about getting COVID-19.

The FCV-19S in our language items showed a good Cronbach's alpha: 0.875 and solid parameters for confirmatory factor analysis. All factor loadings from the retained seven items were significant and strong (0.57 to 0.85).

The SPSS software, version 22, and JASP for factory analysis were used for statistical analysis. The characteristics of the sample were described using descriptive statistics. An independent-sample t test and one-way ANOVA test were used for analysis. The p values less than 0.05 were considered significant.

RESULTS

A total of 110 participants were included in the study. The sample's demographic information can be found in Table 1. The age of the 110 participants, the mean and SD (standard deviation) was 36.3±9.5 years. 81.8% were male, 76.4% were from the COVID-19 Acute Department, 56.4% with less than 13 years of experience and they had worked 27.4 weeks in Covid Departments before the study. There were 47.3 percent nurses, 39.1 percent registered nurses and 13.6 percent medical doctors.

The global FCV–19s mean score was 16.3±6.1. More than half of the study participants (61%) considered it as low levels of fear, and 39% of the participants considered it as high levels of fear. An independent samples t test was conducted to compare the FCV-19s scores between employees with less than 27 weeks experiences with COVID-19 (17.6±6.3) and employees with more than 27 weeks COVID-19 experience (14.5±5.4) and we found a significant difference of p=0.006.

The mean score for items is displayed in table 2. Item 5 (»When watching news and stories about Coronavirus-19 on social media, I become nervous or anxious«) had the highest mean value and item 3 (»My hands become clammy when I think about Coronavirus-19«) had the lowest. Statistically significant differences were again found between employees' regard for experience with COVID-19 (items 1, 2, 3, 5, 7) and COVID units (Intensive Care Unit- ICU and Acute Unit- AU; item 4). There were no statistical differences in other categories.

DISCUSSION

The objective of the study was to determine the extent of COVID-19-related fear among hospital staff. During the COVID-19 pandemic the psychological disturbances arise as a substantial factor (10). The fear associated with infectious diseases has particular importance for individuals because it distrubs rational thinking when the person reacts to COVID-19 (11).

Our research took place during the fourth epidemic wave. Protective equipment was not lacking, and employees could be vaccinated if they wished. The issue of vaccination among employees is a very sensitive issue in our country so we did not include it in the basic data. The global FCV-19s mean score was 16.3. This value is slightly lower than the mean scores of other authors, like for example Shehada and associates (11) 17.5, Moussa and associates (5) 19.7, Nguyen and associates (12) 19.6, Reyna and associates (13) 19.3, Ching and associates (14) 19.1, but higher than the score in another study conducted across five European countries (15) 15.2.

Experience with work is a significant parameter for fear. A significant difference was found when we compared the FCV-19s scores between employees with less than 27 weeks experience with COVID-19 and employees with more than 27 weeks COVID-19 experience. In this study, statistically significant differences were again found between employees regarding experiences with COVID-19 (items 1,2,3,5,7) patients and between COVID-19 units (Intensive Care Unit- ICU and Acute Unit- AU; item 4). The protective equipment in the Intensive Care Unit was of much higher quality than that in the Acute Unit. The study in Peru found no evidence of the association between perception of PPE availability and mental health outcomes (16).

We found no correlations between age, gender, professional role, and the fear of infection. In our research there is a small number of participants. According to a

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Table 1. Characteristics of the study participants.

Variable	Participants (n=110)	Percentage (%)
Gender		
Male	20	18.2
Female	90	81.8
Age (36.3±9.5)		
≤36	53	48.2
>36	57	51.8
Job categories, N (%)		
Nurses	52	47.3
Registered nurses	43	39.1
Medical doctors	15	13.6
Department		
COVID-19 acute department	86	76.4
Intensive care COVID-19 unit	24	23.6
Years of experience (13.6±9.6)		
≤13	62	56.4
>13	48	43.6
Previous work with COVID □19 patients in weeks (27.4±23.4)		
≤27	65	59.1
>27	45	40.9

number represent the mean±standard deviation, absolute numbers or percentages

Table 2. Characteristics of the study participants in relation to FCV-19S items mean scores.

Items	All participants	A:B	p	C:D	p
I am most afraid of Coronavirus-19	2.46±1.22	2.31:2.51	0.480	2.57:2.31	0.270
It makes me uncomfortable to think about Coronavirus-19	2.54±1.15	2.46:2.56	0.720	2.75:2.22	0.016
My hands become clammy when I think about Coronavirus-19	1.82±0.93	1.58:1.89	0.142	1.98:1.58	0.020
I am afraid of losing my life because of Coronavirus-19	2.45±1.25	2.00:2.58	0.036	2.62:2.60	0.089
When watching news and stories about Coronavirus□19 on social media, I become nervous or anxious	3.05±1.27	3.23:2.99	0.400	3.26:2.73	0.035
I cannot sleep because I am worrying about getting Coronavirus-19	2.06±1.16	1.77:2.15	0.130	2.23:1.82	0.058
My heart races or palpitates when I think about getting Coronavirus-19	1.94±1.07	1.69:2.01	0.190	2.17:1.60	0.006

A-COVID-19 Intensive Care Unit; B-COVID-19 Acute Care Unit; C-previous work ≤27weeks; D - previous work >27weeks; number represent the mean±standard deviation and absolute numbers, as appropriate; p: statistical significance of the difference

recent systematic review of 55 articles (17), it was found that being a nurse and being female appeared to confer a greater risk in terms of fear of infection (17). It is important to acknowledge that most studies included in the systematic review had predominantly female participants. Authors in one study found that older age predicted greater fear of infection (18).

The limitation of the study is its small sample size. Despite this, the study offers preliminary or pilot results for future research in this field. Additionally, as the study was conducted on hospital personnel, the findings cannot be extrapolated to the general population. Moreover, no formal diagnoses of mood disorders were obtained.

In conclusion, regardless of the duration of the pandemic, fear is still present. Experience in work with COVID-19 patients can reduce fear among employees. Given the known consequences of fear on both the individual and the quality of his or her work, it might make sense to use a questionnaire to identify the most vulnerable individuals and exclude them from work on the COVID-19 wards.

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REFERENCES

1. Coronaviridae study group of the International Committee on Taxonomy of Viruses. The species Severe acute respiratory syndrome-related coronavirus: classifying 2019-nCoV and naming it SARS-CoV-2. Nat Microbiol 2020; 5: 536-44.
2. The European Respiratory Virus Surveillance Summary (ERVISS). Solna: European Centre for Disease Prevention and Control, 2021. (https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases).
3. Steimer T. The biology of fear- and anxiety-related behaviors. Dialogues Clin Neurosci 2002; 4: 231-49.
4. Pfefferbaum B, North CS. Mental health and the COVID-19 pandemic. N Engl J Med 2020; 383: 510-12.
5. Moussa ML, Moussa FL, Alharbi HA, et al. Fear of nurses during COVID-19 pandemic in Saudi Arabia: a cross-sectional assessment. Front Psychol 2021; 12: 736103.
6. Fronteira I, Ferrinho P. Do nurses have a different physical health profile? A systematic review of experimental and observational studies on nurses' physical health. J Clin Nurs 2011; 20: 2404-24.
7. Oyama Y, Fukahori H. A literature review of factors related to hospital nurses' health-related quality of life. J Nurs Manag 2015; 23: 661-73.
8. Zhu Z, Xu S, Wang H, et al. COVID-19 in Wuhan: Sociodemographic characteristics and hospital support measures associated with the immediate psychological impact on healthcare workers. E Clinical Medicine 2020; 24: 100443.
9. Ahorsu DK, Lin CY, Imani V, Saffari M, Griffiths MD, Pakpour AH. The Fear of COVID-19 Scale: development and initial validation. Int J Ment Health Addict 2020; 27: 1-9.
10. Geldsetzer P. Knowledge and perceptions of COVID-19 among the general public in the United States and the United Kingdom: a cross-sectional online survey. Ann Intern Med 2020; 173: 157-60.
11. Shehada AK, Albelbeisi AH, Albelbeisi A, El Bilbeisi AH, El Afifi A. The fear of COVID-19 outbreak among health care professionals in Gaza Strip, Palestine. SAGE Open Med 2021; 9: 20503121211022987.
12. Nguyen HT, Do BN, Pham KM, el al. Fear of COVID-19 Scale-Associations of Its scores with health literacy and health-related behaviors among medical students. IJERPH 2020; 17: 4164.
13. García-Reyna B, Castillo-García GD, Barbosa-Camacho FJ, et al. Fear of COVID-19 Scale for hospital staff in regional hospitals in Mexico: a brief report. Int J Ment Health Addict 2020: 1-12.
14. Ching SM, Cheong AT, Yee A, et al. Level of fear towards COVID-19 and its determinants among healthcare providers in Malaysia: A cross-sectional study. Malays Fam Physician 2023; 18: 56.
15. Patelarou E, Galanis P, Mechili EA, et al. Assessment of COVID-19 fear in five European countries before mass vaccination and key predictors among nurses and nursing students. Vaccines 2022; 10: 98.
16. Romero-Cabrera AB, Lindo-Cavero A, Villarreal-Zegarra D, et al. Perception of personal protective equipment availability and mental health outcomes in workers from two national hospitals during the COVID-19 pandemic. Heliyon 2023; 10: e23327.
17. Cabarkapa S, Nadjidai SE, Murgier J, Ng CH. The psychological impact of COVID-19 and other viral epidemics on frontline HWS and ways to address it: a rapid systematic review. Brain Behav Immun-Health 2020; 8: 100144.
18. Troisi A, Nanni RC, Riconi A, Carola V, Di Cave D. Fear of COVID-19 among healthcare workers: the role of neuroticism and fearful attachment. J Clin Med 2021; 10: 4358.