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Original Article

Evaluation of healthcare professionals' fears and quality of life regarding COVID-19; comparison of the two physician groups

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Abstract

Aim: The COVID-19 pandemic not only causes morbidity and mortality around the world, but also causes anxiety and fear among people. Healthcare workers are one of the groups most commonly affected during the epidemic process. It has been determined that the main transmission in COVID-19 is through droplets. This study aimed to measure the fear and anxiety about COVID-19 and evaluate the quality of life in two physicians' groups; ENT physicians with direct contact and psychiatrists without direct contact with the respiratory tract while examining patients.

Materials and Methods: One hundred twenty-seven physicians accepted to fill in the online questionnaire were included in the study. The questionnaire form consisting of sociodemographic data form, the Fear of COVID-19 Scale, and SF-36 was applied online.

Results: The presence of a psychiatric disturbance diagnosis and the rate of receiving psychiatric support in the past were higher in the psychiatrist group. All other demographic data were similar in both groups. When the Fear of COVID-19 Scale subscales and total score, SF-36 subscales were compared, no significant difference was found between the two groups.

Conclusions: Our findings emphasize that both groups of physicians' fears about the pandemic and their quality of life are affected at similar rates. Longitudinal studies are needed to investigate other factors affecting healthcare professionals in public health emergencies such as pandemics.

Keywords: COVID-19; fear; life quality; pandemic; physicians

INTRODUCTION

A new type of coronavirus (2019-nCoV), which belongs to the coronavirus family, first appeared in Wuhan, China, in December 2019. Due to its similarity with the SARS agent, it was named Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), and the disease was called Coronavirus Disease-2019 (COVID-19) (1,2). The World Health Organization (WHO) declared COVID-19 as "an international public health problem" on 30 January 2020 and "pandemic" on 11 March 2020 (3).

Due to the rapid spread of the virus, the number of individuals caught with COVID-19 has increased worldwide in a short time. In our country, the first coronavirus case was seen in March 2020, and a significant increase in the number of cases was observed in the following days. Increasing threat of a pandemic in the world resulted in travel restriction, social isolation, and media information overload, leading to an atmosphere of global concern (4). However, the strategies in managing both the pandemic and the pandemic have affected the quality of life by disrupting the psychosocial life of the persons (5).

Healthcare workers who are at the forefront of pandemic periods are at risk of mental disorders. As in previous pandemics, healthcare workers have been exposed to physical and psychological stress in the COVID-19 pandemic (2).Many studies have evaluated the pandemic's psychological effects on healthcare workers, including doctors, nurses, caregivers, and revealed that fear and stress increased in healthcare workers during the pandemic process (4,6,7). Sinanović et al. reported that the COVID-19 pandemic is associated with negative psychosocial consequences, including depressive symptoms, anxiety, anger and stress, sleep disorders, symptoms of posttraumatic stress disorder, social isolation, loneliness, and stigmatization (8).It is thought that many factors such as the identification of

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healthcare workers in the high-risk group, worsening working conditions during the pandemic process, fear of infecting family members, and isolation from their families are responsible for this situation (9). In a study evaluating emergency medical services professionals, the fear of infecting family members with COVID-19 was found to be significantly higher in participants (10).

During the pandemic process that affects all healthcare professionals, the fears and quality of life may also vary among the staff working in different fields.

The main pathway for the spread of COVID-19 is the inhalation or ingestion of virus-containing droplets and aerosols formed during coughing, sneezing, and speaking. Similarly, it can be transmitted by contact with the oral and nasal mucosa or conjunctiva (11).

Considering the transmission routes of COVID-19, physicians who examine the upper respiratory tract thus more likely to be exposed to SARS-CoV-2(Ear-Nose-Throat physicians) and physicians who can evaluate the patient remotely and therefore have a low probability of direct exposure of virus(psychiatrists), it is thought that different psychological reactions may occur between the two groups.

Considering that fear and anxiety differ between individuals and these differences are affected by sociodemographic characteristics, it is curious how the pandemic affects the fear and quality of life of physicians working in different branches. Although there are many studies examining the psychological effects of COVID-19 on healthcare workers, comparative studies on physicians working in different departments are limited. This study aimed to compare the fears of ear-nose-throat (ENT) physicians and psychiatrists about COVID-19 and their quality of life.

MATERIALS and METHODS

A total of 127 specialist physicians, 55 women and 72 men aged 26-57, who agreed to fill out the online questionnaire, were included in the study. The study's inclusion criteria was to work as an ENT physician or a psychiatry specialist during the pandemic period in Turkey.

Ethical approval was obtained by the Inonu University Health Sciences Non-Interventional Clinical Research Ethics Committee, and the study protocol was carried out in accordance with the Helsinki Declaration guidelines.

After obtaining the informed consent of the participants, individuals were asked to fill out the online questionnaire. The online survey was developed on Google Forms (Googleplex, California, US).The online survey link was distributed via social media platforms (Facebook (Menlo Park, California, US), Telegram (Telegram FZ LLC, London, UK), and WhatsApp (WhatsApp Inc., California, US)) and email. Online survey questions sent to individuals were prepared in Turkish as multiple-choice, closed-ended questions.

The questionnaire form consisted of three main parts. The first part of the questionnaire was composed of questions evaluating the sociodemographic characteristics of the individuals. In the second and third parts of the questionnaire, the individuals' fear level and quality of life during the pandemic process were evaluated using the Fear of COVID-19 Scale and The 36-Short Form Health Survey Questionnaire (SF-36).

Sociodemographic Data Form

Researchers have prepared a form that questions age, gender, marital status, childbearing status, branch in profession, duration of profession, comorbidities(diabetes mellitus, arterial hypertension, cardiovascular diseases, cancer, metabolic diseases, and others), working in the COVID-19 unit, presence of a psychiatric diagnosis(anxiety disorder, depressive disorder, and others), and psychiatric support(questioned as previous psychiatric support for the period before Covid -19, questioned as present psychiatric support for the duration of Covid -19 pandemic).

The Fear of COVID-19 Scale

The Fear of COVID-19 Scale, developed by Ahorsu et al, was adapted to Turkish, and its validity and reliability were carried out by Satici et al.(12,13). The scale's applicable age scale is wide and can be used on university students and adults.

All items of the scale consisting of 7 questions are scored positively. The questions were scored between 1-5 (1-Strongly disagree… 5-Strongly agree) using a 5-Likert type scaling. Scores between 7-35 are taken from the scale. Getting a high score shows that the COVID-19 pandemic fear level is 'high'.

In the Turkish validity and reliability study of the scale, the Cronbach Alpha value was found as (α = .82). In this study, the Cronbach Alpha value of the scale was determined as (α = .90).

The 36-Short Form Health Survey Questionnaire (SF-36)

SF-36, which has a generic scale feature and provides wide-angle measurement among the quality of life scales, was developed and made available by Rand Corporation in 1992 (14). While developing the scale, it was aimed to be short, easy to apply, as well as have a wide range of uses.

In the studies in 1990, it was started with 149 items, and in studies conducted on more than 22,000 people, the 20-item form SF-20 was prepared by factor analysis. However, to increase the psychometric properties and scope, the SF-36 was created by increasing it to 36 items (15). The scale consists of 36 items, and these provide the measurement of 8 dimensions; physical function (10 items), social function (2 items), role limitations due to physical functions (4 items), role limitations due to emotional problems (3 items), mental health (5 items), energy/vitality (4 items), pain (2 items) and general perception of health (5 items).

The scale is evaluated considering the last four weeks. Except for the items, Likert type (triple-six) is made; Items 4 and 5 are answered as 'yes' / 'no' (14). The scale gives a separate total score for each subscale instead of giving only one total score. The subscales assess health between '0' and '100', and '0' includes poor health, while '100' indicates good health. The reliability and validity study of the Turkish version of SF-36 was done by Kocyigit et al. (16).

Statistical Analysis

SPSS 21.0 (Statistical Program in Social Sciences) package program was used for statistical analysis. Data related to quantitative variables were expressed with Mean (x) ± Standard Deviation (SD) and Median (Min-Max), and data for qualitative variables were expressed as numbers and percentages. In order to decide on the parametric and non-parametric tests to be applied to the variables, it was checked whether the variables provided quantitative, independence, homogeneity, randomness, and normal distribution. Whether the variables showed normal distribution or not was determined with the Kolmogorov-Smirnov Normality Test. It was determined that quantitative variables did not show normal distribution, and the Mann-Whitney U test was used to evaluate these variables. Evaluation of qualitative variables was tested with Pearson and Fisher's chi-square test. In evaluating the test results, p <0.05 was considered statistically significant.

RESULTS

The study was conducted on 127 physicians, 65 ENT physicians (51.1%) and 62 psychiatrists (49.9%). The average age of the participants was 33.70 (SD = 4.9, min = 26, max = 57). Fifty-five of the participants were women (43.3%), 72 were men (56.7%). In the two groups, parameters such as averages of ages, duration of practice, being married, having children, had COVID-19, working in a COVID-19 unit, and currently receiving psychiatric support were similar. Demographic data of the participants were compiled in Table 1.

Table 1. Demographics of ENT Physicians and psychiatrists

		ENT Physicians (n=65)		Psychiatrists (n=62)			
		Median (25-75 quartiles)	Min-Max	Median (25-75 quartiles)	Min-Max	Z value	P value
Age		33.0 (30.0-37.0)	26-57	33.0 (31.0-35.0)	27-45	-0.077	0.938
Duration of profession		5.0 (4.0-11.0)	1-24	7.0(5.0-9.0)	1-20	-0.124	0.902
		n	%	n	%	X^2	P value
Gender	Female	15	23.1	20	32.3	1.340	0.321
	Male	50	76.9	42	67.7		
Marriage status	Yes	52	80.0	50	80.6	0.008	1.000
Having Children	Yes	37	56.9	44	71.0	2.709	0.139
Comorbidities	Yes	6	9.2	3	4.8	0.930	0.493
Previous had COVID-19	Yes	13	20.0	8	12.9	1.158	0.202
Working in the COVID-19 Unit	Yes	51	78.5	40	64.5	3.038	0.115
Psychiatric Diagnosis	Yes	2	3.1	22	35.5	21.744	<0.01
Previous Psychiatric Support	Yes	6	17.6	28	45.2	20.897	<0.01
Present Psychiatric Support	Yes	4	6.2	3	4.8	2.886	0.236
	Wanted but not received	9	13.8	16	25.8		

COVID-19: Coronavirus Disease-2019, ENT: ear-nose-throat

The Fear of COVID-19 Scale total scores were also similar in both groups (p = 0.255) analyzed by questions as; "I am terrified of coronavirus" (p = 0.966), "thinking about coronavirus bothers me" (p = 0.277), "my hands sweat when I think of coronavirus" (p = 0.053), "I fear losing my life due to coronavirus" (p = 0.623), "I am worried while watching the news about coronavirus in the media" (p = 0.196), "I cannot sleep because I am worried about getting coronavirus" (p = 0.272), "my heart rate accelerates when I think of coronavirus" (p = 0.094). It is compiled in Table 2.

No significant difference was found in both physician groups according to SF-36 subscales; "Physical function" (p = 0.434), "social function" (0.522), "role limitations due to physical functions" (p = 0.385), "role limitations due to emotional problems" (p = 0.346), " mental health (0.090), "energy / vitality" (p = 0.716), "pain" (p = 0.158) and "general health" (p = 0.863). It is compiled in Table 3.

Table 2. The comparison of the scores of otorinolaryngologists and psychiatrists to the Fear of COVID-19 Scale

The Fear of COVID-19 Scale	ENT Physicians (n=65)		Psychiatrists (n=62)		Z value	P value
	Median (25-75 quartiles)	Min-Max	Median (25-75 quartiles)	Min-Max		
I am terrified of the coronavirus	2-4	1-5	3-4	1-5	-0.043	0.966
Thinking about coronavirus bothers me	2-4	1-5	2-4	1-5	-1.087	0.277
My hands sweat when I think of coronavirus	2-4	1-5	2-3	1-5	-2.012	0.053
I'm afraid of losing my life due to coronavirus	2-4	1-5	2-4	1-5	-0.492	0.623
I am worried when watching news about coronavirus in the media	1-2.50	1-5	1-2	1-5	-1.293	0.196
I can't sleep because I'm worried about getting coronavirus	1-3	1-5	1-3	1-5	-1.099	0.272
My heart rate speeds up when I think of getting coronavirus	1-3	1-5	1-2	1-5	-1.673	0.094
Total Score	14-24.5	7-35	14-21.0	10-35	-1.138	0.255

COVID-19: Coronavirus Disease-2019, ENT: ear-nose-throat

Table 3. The comparison of the scores of ENT physicians and psychiatrists to SF-36

SF-36	ENT Physicians (n=65)		Psychiatrists (n=62)		Z value	P value
	Median (25-75 quartiles)	Min-Max	Median (25-75 quartiles)	Min-Max		
Physical Function	90-100	60-100	83.75-100	35-100	-0.782	0.434
Social Function	37.5-87.5	0-100	37.5-78.125	0-100	-0.640	0.522
Physical Role Challenge	75-75	0-75	75-75	0-75	-0.869	0.385
Emotional Difficulty	66.66-66.66	0-66.67	66.6-66.66	66.67-66.67	-0.942	0.346
Mental Health	44-68	8-92	51-68	24-84	-1.696	0.090
Energy / Vitality	35-60	10-100	35-60	25-95	0.364	0.716
Pain	47.5-55	32.5-65	47.5-58.12	30-77.5	-1.143	0.158
General health	30-55	15-80	33.75-55	20-80	-0.172	0.863

NT: ear-nose-throat, SF-36: The Short Form-36

DISCUSSION

This study aimed to compare ENT physicians' and psychiatrists' quality of life and their fears about COVID-19 during the COVID-19 outbreak. The research was carried out at the peak of the pandemic period in Turkey, about nine months after detecting the first case. There was no significant difference between the two groups of participants in terms of quality of life and fear of COVID-19. The presence of a psychiatric diagnosis and previous psychiatric support were found to be higher in the psychiatric group.

The employee group that the Occupational Safety and Health Administration (OSHA) evaluates in the very high-risk group regarding the risk of COVID-19 infection is healthcare workers. It is known that the risk is higher in physicians who are in direct contact with respiratory tract secretions of patients, such as anesthesiologists, pulmonary disease specialists, ENT physicians, and dentists compared to other physicians (17). Pan et al. found that the increase in anxiety level was associated with the high risk of infection in these people (18). On the contrary, in a study conducted in Singapore, a higher level of anxiety was found in healthcare workers who did not come into close contact with COVID-19 (19). In another study, healthcare personnel experienced more fear, anxiety, and depression than administrative personnel of the hospital. Further investigations found that healthcare professionals caring for COVID-19 patients had almost twice the levels of depression and anxiety than non-clinical staff who had no possibility of contact with coronavirus patients (20). In a study conducted during the pandemic in which 97 nurses and 27 physicians were included, the scale of depression, anxiety, and stress related to COVID-19 were compared and reported no statistically significant difference (21). In our study, no difference was found between psychiatrists and ENT physicians in terms of the fear of COVID-19.

Since the beginning of the pandemic in Turkey, it is known that physicians of all specialties involved in the fight, so

in our study, it was also questioned whether physicians worked in COVID-19-related areas other than their own branches, and the lack of a statistically significant difference between the groups in this sense may explain the lack of difference between anxiety levels.

Quality of life is affected by many conditions, including interpersonal relationships, living environment, psychological and physical conditions. It has been shown that work-related stress factors negatively affect the quality of life in hospital staff (22). With the COVID-19 pandemic, changing of working and living conditions (social isolation, separation from the family), stigma, and physical and mental problems can adversely affect physicians' quality of life. A study conducted in Mexico found that following the widespread media coverage of the influenza epidemic, individuals' risk perception and fear levels against the threat of uncertainty increased at a high level, and their quality of life decreased (23). In a study involving 197 healthcare professionals in India, 45% of the participants had low quality of life during the COVID-19 pandemic, and anxiety symptoms were shown to be associated with low quality of life (24). Jokić-Begić et al., in a study comparing psychiatrists and physicians from other branches, found no statistically significant difference between these groups in the psychological distress and subjective life satisfaction data (25). In our study, the fear of COVID-19 was found similar between the two groups, and the similarity of the results of the quality of life scale between the groups may explain this situation

In this study, the presence of a psychiatric diagnosis and previous psychiatric support were found to be significantly higher in the psychiatric group. However, the lack of difference between the groups in terms of The Fear of COVID-19 Scale and quality of life scale scores can be explained by the fact that psychiatrists are specialized in this field, they are more easily aware of their psychiatric symptoms, and they can access psychiatric support more easily.

The main limitations of this study are that this study was conducted with physicians from only two branches, the questionnaires were filled online by the participants themselves, and clinical interviews were not conducted. In addition, the timing of the study can be considered as a limitation that may affect the results. Because differences in psychiatric symptoms can be expected in screenings performed in the early and late stages of the pandemic. Finally, the lack of statistical multivariate analysis is another limitation of this study.

To our best knowledge, this study is the first to compare the fear of COVID-19 and quality of life among different physician groups. The similarity of demographic data in both groups reduces the effect of variables on the scales. The fact that the study's scale scores were similar in both groups indicates that the physicians were actually affected by the COVID-19 pandemic at similar rates.

CONCLUSION

As a result, the fear of COVID-19 and physicians' quality of life in two different branches in this study were affected by the pandemic at similar rates. Future research should go beyond cross-sectional studies to investigate other factors affecting healthcare workers in public health emergencies such as a pandemic.

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Ethical Approval: This study was approved by the Inonu University Ethical Community (2021/1453).

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