Comparison of Coronavirus Stress and Anxiety Levels in Covid-19 Positive and Negative Healthcare Professionals in a Pandemic Hospital, İzmir Example

Bir Pandemi Hastanesinde Covid-19 Pozitif ve Negatif Sağlık Çalışanlarında Coronavirüs Stres ve Anksiyete Düzeylerinin Karşılaştırılması, İzmir Örneği

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ABSTRACT

Objective: In this study, it is aimed to detect the presence of anxiety in healthcare professionals who are and are not infected with the new type of coronavirus and to reveal the underlying causes of this anxiety.

Methods: This analytical and descriptive study was conducted with 188 healthcare professionals working at Tepecik Hospital between 1-30 July 2020.Coronavirus Anxiety and Perceived Stress Scale were administered to the participants along questionnaire.The statistics of the study were made with the SPSS 18.0 program. The statistically significant if the "p" value was less than 0.05.

Results: 40.43% (n=76) of the whole group consisted of individuals who were positive for the PCR test 59.57% (n=112) were health workers who were not diagnosed with Covid19.Those who worked in Covid19 wards or outpatient clinics were more likely to be infected with coronavirus and was statistically significant (p=0.014).There was a statistically significant difference between the increase in professional experience and the low rate of being positive for Covid19 (p=0.008).It was statistically significant that those whose working hours did not change during the pandemic were more likely to be Covid19 positive than those whose working time changed (p=0.003).

ÖZ

Amaç: Bu çalışmamızda; yeni tip coronavirüs ile enfekte olan ve olmayan sağlık çalışanlarında anksiyetenin varlığını tespit etmek ve bu anksiyetenin altında yatan sebeplerin varlığın ortaya çıkarmak hedeflenmiştir.

Yöntemler: Kesitsel ve tanımlayıcı nitelikte olan bu çalışma 01-30 Temmuz 2020 tarihleri arasında Tepecik Eğitim ve Araştırma Hastanesi'nde çalışan 188 sağlık çalışanı ile yapılmıştır. Katılımcılara Coronavirüs Anksiyete Skalası ve Algılanan Stres Ölçeği uygulanmıştır. Araştırmanın istatistiği SPSS 18.0 programı ile yapıldı. 'p' değerinin 0.05'ten küçük olması istatistiksel olarak anlamlı kabul edildi.

Bulgular: Çalışma grubunun %40,43'ünü (n=76) PCR testi pozitif bireyler oluştururken %59,57'sini (n=112) ise Covid-19 tanısı almamış sağlık çalışanları oluşturmaktaydı.Covid-19 servislerinde veya polikliniklerinde görev alanlarda coronavirüs ile enfekte olma durumu daha fazlaydı ve istatistiksel olarak anlamlıydı (p=0,014). Covid-19 ile enfekte olanlar ile olmayanlar arasında Coronavirüs Anksiyete Skalası toplam skoru açısından istatistiksel bir anlamlılık gözlenmedi (p=0,349).

Sonuç: Covid-19 pandemisi sürecinde tüm sağlık çalışanlarının kaygılı, endişeli ve tükenmiş olduklarına dair veriler bulunmaktadır.

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Conclusion: There are data that all healthcare professionals are concerned and exhausted during the Covid19 pandemic. The lack of a difference in anxiety levels between those infected with Covid19 and those not indicates that healthcare professionals still have concerns about the pandemic.A widespread and effective psychosocial support provided by institutions will reduce the negative atmosphere in the health system.

Keywords: Covid-19, Healthcare Professionals, Coronavirus Anxiety Scale

Covid-19 ile enfekte olanlar ile olmayanlar arasında anksiyete düzeyleri açısından fark olmaması sağlık çalışanlarının pandemi konusunda hala endişelerinin olduğunu göstermektedir.

Anahtar Sözcükler: Covid-19, Sağlık Çalışanları, Coronavirüs Anksiyete Skalası

Introduction

Covid-19 has been defined as a coronavirus disease that has been declared as a pandemic by the World Health Organization (WHO) and develops due to the newly defined SARS CoV 2 virus (1). Coronavirus belongs to a large family of viruses and it is known to cause diseases such as common cold, pneumonia and Severe Acute Respiratory Syndrome (2). According to WHO, published on March 3, 2020, the fatality rate of coronavirus is 2.4% worldwide (3). Covid-19 is spread through droplets from symptomatic or asymptomatic cases (4). The first case in our country was detected on March 10, 2020 (5). Measures such as social distancing, hand washing and using masks have been taken to prevent rapid spread (6). In addition to these measures, curfew restrictions have started in our country, as in many countries (7). In addition, a 14-day quarantine rule was applied to suspicious cases and people from abroad. By these measures, the spread rate of the virus was reduced and a plateau effect in the case-time curve was achieved (8). On June 1, 2020, a step in the normalization process was taken in our country with a decrease in the number of cases. However, as the number of cases increased again in our country with the end of the summer season, curfew restrictions restarted in the last period of November (9).

Healthcare professionals have spent a lot of effort in this difficult process in which dynamic and continuous rapid decisions were made. With the establishment of pandemic hospitals, many healthcare professionals in different positions have switched to a new working order (10). Reasons such as intense work pace, variable working hours and constant use of personal protective equipment have caused fatigue and wear out in healthcare professionals over time. The fact that 601 (3.8%) of the cases diagnosed at the beginning of April were medical personnel increased the concern (11). In the ongoing process, the rights of all healthcare professionals to leave and quit have been restricted starting in mid-March (12). This restriction, which was temporarily lifted during the summer period, was re-applied during the second peak period (13). Along with all these, the continuous updating of diagnostic/follow-up/treatment algorithms related to Covid-19 has caused instability and then anxiety and despair in healthcare professionals. Although the success of some pharmaceutical companies in Vaccination Studies against Covid-19 in the last quarter of 2020 has raised hopes, it can be said that the covid-19 pandemic will not end in the short term (14,15).

The purpose of this study is to determine the level of anxiety in healthcare professionals who are and are not infected with coronavirus, to reveal the presence of emotional stress caused by coronavirus and to identify other triggers underlying this anxiety.

Method

It is a cross-sectional descriptive study. While n=76 healthcare workers with positive Covid 19 PCR tests were used as the study group, n=112 healthcare workers who were not diagnosed with Covid 19 took their place in the study as the control group. The necessary approval for the study was obtained from the Clinical Research Ethics Committee of Health Sciences University Tepecik Training and Research Hospital on 08/06/2020 with the decision number of 2020/7 15.

Participants and Procedure: Our study was conducted with 188 healthcare professionals active in our hospital between 1 - 30 July 2020, which coincides with the first (1) peak period of coronavirus in our country. The data were collected on a purely voluntary basis with the consent and permission of the individuals. The questionnaire was prepared on the internet in accordance with the social distance rule. The internet address associated with the questionnaire was delivered via text message to the mobile phones of healthcare professionals. In the questionnaire developed by the researchers, questions are examining sociodemographic characteristics (age, gender, marital status, etc.), the working order of healthcare professionals in the Covid-19 pandemic period and whether they received mental support during this period. The Turkish version of the 'Coronavirus Anxiety Scale' and the short form of the 'Perceived Stress Scale' was also applied in the questionnaire.

Coronavirus Anxiety Scale: The Coronavirus Anxiety Scale is a 5-question scale with robust reliability (α=.93) based on a study with n=775 people (16). In our study, it was determined as (α=0.95). Cronbach is often used in Alpha Likert-type scales. Cronbach is defined as unreliable if Alpha is $0 < R2 < 0.40$, low reliable if $0.40 < R2 < 0.60$, very reliable if $0.60 < R2 < 0.80$ and highly reliable if $0.80 < R2 < 1.00$ (17). The Turkish version of the Coronavirus Anxiety Scale was translated by Evren C. et al., and its validity and reliability were approved. (18). The necessary permission has been obtained from the Author at this stage, provided that it is properly cited. Questions on this scale are; *"I felt dizzy, dazed or unconscious when I read or listened to the news about the coronavirus, I had trouble falling asleep or staying asleep because I thought about the coronavirus, I felt paralyzed or frozen when I thought about the coronavirus or was exposed to information, I lost interest in eating when I thought about the*

coronavirus or was exposed to information, I felt nauseous or had stomach problems when I thought about the coronavirus or was exposed to information". The answers to these questions and the score equivalent are: *"None=0, Rare, Less than one or two days=1, More than a few days=2, More than seven days=3, Almost every day in the last two weeks=4".*

Perceived Stress Scale: The Perceived Stress Scale was developed by Cohen, Kamarck and Mermelstein (1983) and is designed to measure the degree to which several situations in an individual's life, consisting of 14 substances, are perceived as stressful. In addition to the long-form with 14 items, it has two other forms with 10 and 4 items (19). In this study, a 4-question short form was used. 2 questions are with straight statements and 2 questions are with reverse expressions. These questions are: *"How often did you feel that you couldn't control the important things in your life last month? How often have you relied on your ability to address your personal problems in the past month? How often did you feel that everything was going well in the last month? In the last month, how often did you feel that problems had accumulated so much that you couldn't overcome them?"* The answers to these questions and the score equivalent are: *"Very often=4, Quite often=3, Sometimes=2, Almost Never=1, Never=0".* It is known that PSS (Perceived Stress Scale) scores have a significant and positive relationship with life events and depression, and a negative and significant relationship with life satisfaction, self-esteem and social support (19). A high total score means that the perceived stress level is high (20). Considering that the predicted reliability level for the scales planned to be used in the studies is 0.60 and 0.80, the Cronbach's alpha score of the scale for this study was 0.61 and showed internal consistency (20,21,22).

Measures: While determining the sample, it was aimed to reach all healthcare workers infected with covid 19. The study was terminated due to the presence of health workers who did not accept to participate in the study and the end of the first peak period in the pandemic.

Statistical Analysis: Statistical evaluation was done with SPSS 18.0 program. Validity and reliability analysis of applied Likert-type questionnaire results were performed. The compliance of continuous variables to normal distribution was tested. Comparisons of independent groups were made using the "student t" test for variables conforming to the normal distribution, and the "Mann Whitney U" test for those who did not. Categorical variables were presented as frequencies and percentages with cross-tables and their distributions were compared with "Chi-Square" test methods. In all statistical comparison tests, the margin of error of the first type was determined as α:0.05, and the difference between groups was considered statistically significant if the value of "p" was less than 0.05.

Results

188 health workers, including the control group, participated in our study. 40.43% of participants (n=76) tested positive for Covid-19 PCR. 59.57% (n=112) had not been diagnosed with Covid-19, and this number constituted our control group (Table 1).

76.31% (n=58) of the health workers who tested positive for Covid-19 PCR were in the 20-39 age range. 54.48% (n=61) of the control group were in the 20-39 age range. 36.8% (n=28) of healthcare professionals who tested positive for Covid-19 PCR test were male and 63.2% (n=48) were female, while 34.8% (n=39) of the control group were male and 65.2% (n=73) were female (Table 1).

There was a significant association between covid-19 negative status and age increase (p=0.002). While there was no significant difference between Covid-19 negative status and gender and marital status, a significant relationship was found with a high educational level (p=0.049). When we look at the status of getting a Covid-19 diagnosis with the distribution of tasks, it was significant that the physician group was less Covid-19 positive than the nurses/obstetricians and other assistant healthcare personnel (p = 0.001). In addition, there was a statistically significant difference between the increase in years of work and a lower rate of Covid-19 positive (p = 0.008) (Table 1).

The proportion of health workers who considered themselves at risk, including the control group, was (n=158) 84.04%, while the proportion of people who said they had anxiety during this process was (n=166) 88.30%. Although there were numerically many anxious people, the rate of those who said they needed psychological support during the pandemic period was (n = 73) 38.83%. However, the proportion of those receiving psychological support was (n = 41) 21.80%. Of those who received support, only (n=12) 29.27% received professional support. The proportion of those who thought their job was always stressful was (n=84) 44.68% (Table 2).

When we look at the healthcare professionals with at least one of the family members diagnosed with Covid-19 and the Covid-19 infection, the more Covid-19 positive status was statistically significant (p = 0,000). Considering the status of being diagnosed with Covid-19 and the healthcare personnel assigned in another unit by leaving the current unit of work, the status of being less Covid-19 Positive was significant (p = 0,000) (Table 3).

Looking at the status of getting infected with Covid-19 with those who served only on the day shift (08:00-17:00), statistical significance was found in the case of contracting Covid-19 at higher levels (p=0.015). The higher levels of Covid-19 negative status were significant in those who served in pandemic services or outpatient clinics than those who did not (p=0.014). It was statistically significant that those whose working time did not change during the pandemic had a higher level of Covid-19 positivity than those who did (increasing or decreasing) (P=0.003) (Table 3).

Looking at the Coronavirus Anxiety Scale, one of the important points of the study, the average score of all participants was 3.03, while the average value of the total score of the Perceived Stress Scale short form, another important scale, was 8.04 (Table 4).

No statistical significance was observed between the total score of the coronavirus Anxiety Scale between those who tested positive for Covid-19 and the control group (p=0.349). Similarly, no

Table 1. Comparison of Sociodemographic Data with Control Group					
			Covid-19		p
			Positive	Negative	
Age	40 years and older	n	18	51	0.002
		%	23.68%	45.52%	
	Ages 20 to 39	n	58	61	
		%	76.31%	54.48%	
Gender	Male	n	28	39	0.776
		%	36.8%	34.8%	
	Female	n	48	73	
		%	63.2%	65.2%	
Education status	High School / Elementary	n	17	12	0.049
		%	22.37%	10.71%	
	University	n	59	100	
		%	77.63%	89.29%	
Task	Auxiliary medical personnel	n	23	28	0.001
		%	30.26%	25.00%	
	Nurse/Obstetrician	n	29	19	
		%	38.16%	16.97%	
	Doctor	n	24	65	
		%	31.58%	58.03%	
Year of work in the profession	16 years and over	n	17	46	0.008
		%	22.37%	41,07%	
	0-15 years	n	59	66	
		%	77.63%	58.93%	

statistical significance was observed between the total score of the Perceived Stress Scale (short form) between those with positive Covid-19 test and the control group (p=0.290) (Table 4).

Compared to the educational level of all participants and the total score of the coronavirus Anxiety Scale; it was statistically significant that the anxiety level decreased as the educational level increased (p=0.006). When the total score of Coronavirus Anxiety Scale was compared with the fact that all participants were working in pandemic outpatient clinics or services, it was found that the anxiety level did not increase statistically (p = 0.504). The Coronavirus Anxiety Scale score of those receiving mental support was high, and it was statistically significant that those with high anxiety levels also needed mental support (p=0.001) (Table 5).

Considering the answers given in the Coronavirus Anxiety Scale, the sample size and the statistical significance value, when we accept the cut off value as "1", no statistically significant difference was observed between those with a score of *"1' and above"* and those with *'0'* when the Covid-19 positive and the control group are compared (p = 0.556). Also, no statistically significant difference was observed between those whose score was *"1' and above"* and those whose score was *'0'* compared to the working years in the profession and the working conditions in the pandemic sections (p=381), (P=474) (Table 6.).

Discussion

Healthcare professionals, who have to work 24 hours a day without interruption under the stress of being primarily responsible for health, experience psychological and physiological disorders due to the increased workload (23). These can occur in the form of health problems such as chronic insomnia, fatigue, fear of causing or going to malpractice, burnout syndrome, concentration disorders, chronic diseases, and some types of cancer (24). Furthermore, trying to fight an pandemic that they did not know about before has affected medical personnel too much (25,26). In our study, no causation was found between coronavirus infection status and both the Coronavirus Anxiety Scale and the Perceived Stress Scale. It can be said that those who fully carry out infection protocols/procedures have both avoided being infected with coronavirus and that their stress level has not changed. Although the presence of a continuous infection creates a persistent level of anxiety, it can be said that being infected with Covid-19 does not cause much variability on the anxiety.

In our study, it was observed that anxiety levels decreased as education levels increased, and stress increased in the presence of infected or suspected patient contact with Covid-19. Some studies showing that anxiety and insomnia are more common in doctors and nurses who come into contact with possible or diagnosed cases (27,28). We can say that those with a high level of education can access sufficient data in the light of evidence-

Table 2. Anxiety Status of All Participants (n=188)		n	%
	I'm in isolation.	9	4.79
	My treatment was completed, but I didn't start work because I was on leave or a report.	10	5.32
Which process are you in now?	My treatment was completed and I'm back to work.	57	30.32
	My Covid 19 PCR test is negative (I have not been diagnosed with Covid-19)	112	59.57
Do you consider yourself at risk?	Yes	158	84.04
	No	30	16.96
Has anyone (mother, father, siblings, wife, child) been diagnosed with Covid-19 in your family?	Yes	20	10.64
	No	168	89.36
Did you have any concerns during the Covid-19 pandemic?	Yes	166	88.29
	No	22	11.71
Have you experienced burnout syndrome?	Yes	61	32.47
	No	127	67.53
Do you think you needed psychiatric/psychological support during the pandemic?	Yes	73	38.83
	No	115	61.17
Did you receive psychological support during the pandemic?	Yes	41	21.80
	No	147	78.20
	Always	84	44.68
	Often	54	28.72
Do you think your job is stressful?	Sometimes	39	20.74
	Rarely	9	4.79
	Never	2	1.07

based medicine, and accordingly, the level of anxiety decreases. On the other hand, we believe that when it comes to contact with a suspicious patient, it creates an exacerbation of the anxiety level again.

Chan AO et al. found that doctors were 1.6 times more likely to experience psychiatric symptoms than nurses (29). Another study showed high levels of sleep problems, anxiety, and depression symptoms in healthcare professionals (30). In addition, Ataç Ö.

Table 3. Comparison of Covid-19 Pandemic Working Order with Control Group			Covid-19		p
			Positive	Negative	
Has anyone (mother, father, siblings, wife, child) been diagnosed with Covid-19 in your family?	Yes	n	17	3	0.000
		%	22.37%	2.68%	
	No	n	59	109	
		%	77.63%	97.32%	
Has the service or space you worked in during the Covid-19 pandemic been changed?	Yes	n	20	61	0.000
		%	26.32%	54.46%	
	No	n	56	51	
		%	73.68%	45.54%	
How was your working order during the Covid-19 pandemic?	Just a shift	n	12	21	0.015
		%	15.79%	18.75%	
	Only full-time working every day (8.00-17.00)	n	21	11	
		%	27.63%	9.82%	
	Only flexible working hours	n	13	28	
		%	17.11%	25.00%	
	Both shift and overtime together if necessary	n	30	52	
		%	39.47%	46.43%	
Did you serve in the covid-19 outpatient clinic or service?	Yes	n	33	69	0.014
		%	43.42%	61.61%	
	No	n	43	43	
		%	56.58%	38.39%	
Any changes in your working time compared to before the Covid-19 pandemic?	My working time has increased	n	12	28	0.003
		%	15.8%	25.0%	
	My working time hasn't changed	n	35	25	
		%	46.1%	22.3%	
	My working time has been reduced	n	29	59	
		%	38.2%	52.7%	

et al. stated in the study that while anxiety symptoms in nurses / obstetricians and dentists are higher than other professions, doctors are the occupational group with the least anxiety symptoms (31). In our study, it was found that the physician group was less likely to be infected with coronavirus than the nurse/obstetrician and other auxiliary medical personnel. As the years of working in the profession increased, there was a significance between the level of not getting infected with the coronavirus. It can be seen that a doctor with high experience in the profession has a low level of being infected with Covid-19, while other healthcare professionals have a higher level of being infected with Covid-19 and a higher level of anxiety than doctors.

In a study on the anxiety levels of individuals, Ekiz T. et al. found that women's health anxiety perception levels were high (2). Moreover, another study found that levels of anxiety and depression in women were significantly associated with the Covid-19 pandemic (32). Our study is similar to this aspect.

Table 4. Comparison of Coronavirus Survey Scale and Perceived Stress Scale of Covid-19 Negative and Positive Individuals (n=188)					
Coronavirus Anxiety Scale		n	Mean St.D.Med.	Min. Max.	p
Covid-19 State	Positive	76	2,70±3,91 (1,00)	(0,00-17,00)	
	Negative	112	3,25±4,56 (1,00)	(0,00-20,00)	0.349
	Total	188	3,03±4,31 (1,00)	(0,00-20,00)	
Perceived Stress Scale		n	Mean St.D.Med.	Min. Max.	p
Covid-19 State	Positive	76	7,75±2,91 (8,00)	(0,00-14,00)	
	Negative	112	8,24±3,02 (8,00)	(0,00-16,00)	0.290
	Total	188	8,04±2,98 (8,00)	(0,00-16,00)	

Table 5. Comparison of Data with Coronavirus Anxiety Scale (n=188)

		n	Mean St.D.Med.	Min. Max.	p
Year of work in the profession	16 years and over	63	3,32±4,70 (1,00)	(0,00-20,00)	0.946
	0-15 years	125	2,88±4,11 (1,00)	(0,00-20,00)	
Age	40 years and over	69	3,30±4,56 (1,00)	(0,00-20,00)	0.721
	Ages 20 to 39	119	2,87±4,17 (1,00)	(0,00-20,00)	
Education level	University	159	2,71±4,06 (1,00)	(0,00-20,00)	0.006
	High School / Secondary Education	29	4,76±5,24 (4,00)	(0,00-20,00)	
Did you receive psychological support during the pandemic?	Yes	41	5,17±5,51 (4,00)	(0,00-20,00)	0.001
	No	147	2,43±3,72 (1,00)	(0,00-20,00)	
Has the service or space you worked in during the Covid-19 pandemic been changed?	Yes	81	2,91±3,84 (1,00)	(0,00-17,00)	0.902
	No	107	3,11±4,65 (1,00)	(0,00-20,00)	
Did you serve at the Covid-19 outpatient clinic or service?	Yes	102	3,43±4,98 (1,00)	(0,00-20,00)	0,504
	No	86	2,55±3,32 (1,00)	(0,00-16,00)	
Did you have contact with a patient who was diagnosed with Covid-19 while working?	Yes	113	3,00±3,79 (2,00)	(0,00-17,00)	0,012
	No	34	1,50±3,03 (0,00)	(0,00-16,00)	

We believe that being a woman, as well as being a medical staff, deepens the level of anxiety in this process.

Looking at the researches on Covid-19, some studies are showing that lower levels of psychological impact, depression and anxiety are detected with more preventive measures (33). Ataç Ö. et al. found that there was no significant difference in anxiety and insomnia both according to the current task unit and according to the new tasks carried out during the pandemic period (31).

Polat Ö. et al. found that healthcare professionals who use their personal protective equipment appropriately when necessary have low depression, anxiety and stress scores (34). Likewise, in a study conducted in China, it was reported that individuals who took part in this process were significant in terms of having a lower score between the high mask-wearing rate and the DASS Depression and Anxiety subscales (35). In our study, similarly, working in covid-19 outpatient clinics or services did not

Table 6. Comparison of Data by Cut-Off Value "1" on the Coronavirus Anxiety Scale

			Coronavirus Anxiety Scale Cut-off		p
			1+	<1	
Did you serve at the Covid-19 outpatient clinic or service?	Yes	n	27	75	0.474
		%	60.00%	52.45%	
	No	n	18	68	
		%	40.00%	47.55%	
Year of work in the profession	0-15 years	n	27	98	0.381
		%	60.00%	68.53%	
	16 years and over	n	18	45	
		%	40.00%	31.47%	
Covid-19	Positive	n	16	60	0.556
		%	35.56%	42.96%	
	Negative	n	29	83	
		%	64.44%	58.04%	

increase the level of anxiety. Those who did not work in covid-19 outpatient clinics or services had a higher rate of covid-19 infection than those who worked. Based on this, strict measures taken at the first point of close contact can be considered to have reduced the level of anxiety. On the other hand, it can be interpreted that those who do not work in covid-19 departments are more easily infected by assuming that they are away from the danger zone.

Anxiety disorders are known to become more pronounced with a decrease in interpersonal communication and with the cessation of social support (36). It should be noted that all kinds of psychological events disrupt the general functioning of the body with prolonged stress, laying the ground for not only Covid-19 but many infections or exacerbating psychosomatic diseases (26). In a multicenter study in Turkey; The perception of stigma score who received psychological support during the COVID-19 pandemic and who had psychological disorders during or before the COVID-19 pandemic outbreak were found to be significantly higher (37). In our study, those who said they needed mental support had a high score compared to the Coronavirus Anxiety Scale, while those who had high anxiety levels also needed mental support were significantly higher. We believe that the morale and motivation of health workers should be increased throughout the pandemic and that institutions should provide all kinds of support in terms of psychological support.

No significant cut-off was detected in studies with the coronavirus Anxiety Scale (16,18). In the score table, when the cut off '9' is taken as a basis, 90% sensitivity and 85% specificity were found, and 71% sensitivity and 74% specificity were found when '5' was taken as a basis (16,18). In our study, we considered the cut-off as '1'. Accordingly, no significant difference was found between those with a Cut-off value of *"1 and above"* and those with a *"0"* in terms of the frequency of infection with Covid-19. It can be concluded that there is no change in the individual's current level of anxiety, whether the person is infected with coronavirus or not.

Conclusion

Those fighting on the front lines against the pandemic are healthcare professionals. Until infected with Covid-19, a staff with a high level of anxiety did not have any change in the anxiety level after being infected, indicating that the individual is now hopeless and bored. The fact that the healthcare professionals' anxiety level does not decrease indicates that their concerns about Covid-19 persist. The service of a disenchanted healthcare professional will reduce the quality of health, as well as lead to dangerous consequences such as medical malpractice, burnout or suicide.

At this point, we believe that institutions should be as committed to protective equipment as they are to social or psychological support. A widespread, effective and sustainable psychosocial support will lead to efficient service in the health system.

Highlight Key Points

There is no difference in anxiety levels between those who are infected with Covid-19 and those who are not.

Healthcare professionals still remain concerned about the pandemic.

Psychosocial support is an important argument in the healthcare system.

Constraints

The constraints of our study are that the Coronavirus Anxiety Scale used in our study does not have a certain cut-off value and the sample size does not include primary health care institutions.

References

1. Sohrabi C, Alsafi Z, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). Int J Surg. 2020;76:71-76.

2. Tutku E, Ilıman E, Dönmez E. Bireylerin Sağlık Anksiyetesi Düzeyleri ile Covıd-19 Salgını Kontrol Algısının Karşılaştırılması Usaysad Derg, 2020; 6(1):139-154.

3. WHO Director-General's opening remarks at the media briefing on COVID-19. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---3-march-2020 E.T:07/12/2020

4. Rothe C, Schunk M, et al. Transmission of 2019-nCoV Infectionfroman Asymptomatic Contact in Germany. N Engl J Med. 2020;382(10):970-971.

5. https://www.saglik.gov.tr/TR,64383/koronavirus-alacagimiz-tedbirlerden-guclu-degildir.html E.T.: 20/10/2020

6. World Health Organization, Novel Coronavirus (2019-nCoV) Advice for the Public, (2020) https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public E.T:07/12/2020

7. https://www.icisleri.gov.tr/duyuru1004 E.T. 20/10/2020.

8. https://www.saglik.gov.tr/TR,65192/yogun-bakim-yatak-doluluk-oranimizi-yuzde-60lara-indirdik.html E.T. 20/10/2020

9. https://www.icisleri.gov.tr/koronavirus-salgini-yeni-tedbirler E.T.21/11/2020.

10. https://covid19.saglik.gov.tr/TR,66495/pandemi-hastanesi.html E.T. 20/10/2020

11. https://www.bbc.com/turkce/live/haberler-dunya-52088533 E.T.06/12/2020

12. https://shgm.saglik.gov.tr/TR,64726/covid-19-salgini-suresince-saglik-kuruluslarinda-saglik-personel-ayrilislari.html E.T:16/12/2020

13. https://www.bbc.com/turkce/live/haberler-turkiye-54701006 E.T:16/12/2020

14. https://www.bbc.com/turkce/haberler-dunya-54919704 E.T:07/12/2020

15. https://www.bbc.com/turkce/haberler-dunya-54962498 E.T:07/12/2020

16. Lee, S. A. (2020a). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. Death Studies, 44(7), 393–401.

17. Uzunsakal E, Yıldız D,. Alan Araştırmalarında Güvenilirlik Testlerinin Karşılaştırılması ve Tarımsal Veriler Üzerine Bir Uygulama. Uygulamalı Sosyal Bilimler Dergisi, 2018; 2(1):14 - 28

18. Evren C, Evren B, Dalbudak E, Topcu M and Kutlu N. Measuring anxiety related to COVID-19: A Turkish validation study of the Coronavirus Anxiety Scale, Death Studies Death Stud. 2020 Jun 3:1-7

19. Eskin M, Harlak H, Demirkıran F, Dereboy Ç Algılanan Stres Ölçeğinin Türkçeye Uyarlanması. Güvenirlik ve Geçerlik Analizi New Symposium Journal 2013;51(3).

20. Bilge A, Öğce F, Genç R.E, Oran N.T. Algılanan Stres Ölçeği (Asö)'Nin Türkçe Versiyonunun Psikometrik Uygunluğu. Ege Üniversitesi Hemşirelik Yüksek Okulu Dergisi 2009;25(2):61-72

21. Tavşancıl E. Tutumların Ölçülmesi ve SPSS ile Veri Analizi.2. Baskı, Ankara;Türkiye;.2005

22. Özdamar K. Paket Programlar ile İstatistiksel Veri Analizi. 4. Baskı, Kaan Kitabevi, Eskişehir: Türkiye; 2002 p 661-6733

23. Kıroğlu F. Covid-19 Pandemi Ortamında Çalışma Koşulları ve Genel Sorunlar Meyad Akademi, 2020;1(1) 79-90.

24. Meydanlıoğlu A. Sağlık Çalışanlarının Sağlığı ve Güvenliği. Balıkesir Sağlık Bilimleri Dergisi 2013;2(3) 192-199.

25. Greenberg N, Docherty m, Gnanapragasam S, Wessely S. managing mental health challenges faced by healthcare workers during covid-19 pandemic. bmj. 2020;368

26. Baltacı NN, Coşar B. COVID-19 pandemisi ve ruh beden ilişkisi. İçinde Coşar B, editör. Psikiyatri ve Covid-19. 1. Baskı. Türkiye Klinikleri; Ankara:Türkiye; 2020. p.1-6

27. Uzun ND, Tekin M, Sertel E, Tuncar A. Psychological and social effects of COVID-19 pandemic on obstetrics and gynecology employees. J Surg Med. 2020;4(5):355-358. doi:10.28982/josam.735384

28. Zhang WR, Wang K, Yin L, et al. Mental Health and Psychosocial Problems of Medical Health Workers during the COVID-19 Epidemic in China. Psychother Psychosom. 2020;100053(45):242-250. doi:10.1159/000507639

29. ChanAO, HuakCY. Psychological impact of the 2003 severe acute respiratory syndrome outbreak on health care workers in a medium size regional general hospital in Singapore. Occup Med (Lond). 2004,54:190-196

30. Lai J, ma S, Wang Y, Cai z, Hu J, Wei N, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAmA network open. 2020;3(3):e203976-e203976

31. Ataç Ö, Sezerol M.A, Taşçı Y, Hayran O. COVID-19 pandemisinde görev yapan sağlık çalışanlarında anksiyete belirtileri ve uykusuzluk. Turk J Public Health 2020;18(Special issue):47-57

32. Wang C, Pan R, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 Coronavirus disease (COVID-19) epidemic among the general population in China. Int J Environ Res Public Health. 2020;17(5):1729.

33. Leung G.M. The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. J Epidemiol Community Health. 2003;57(11):857-863

34. Polat Ö, Coşkun F. Covid-19 Salgınında Sağlık Çalışanlarının Kişisel Koruyucu Ekipman Kullanımları ile Depresyon, Anksiyete, Stres Düzeyleri Arasındaki İlişkinin Belirlenmesi. Med J West Black Sea 2020;4(2): 51-58

35. Li Z, Ge J, et al. Vicarious traumatization in the general public, members, and non-members of medical teams aiding in Covıd-19 control. Brain Behav Immun. 2020;88:916-919.

36. Xiao C. A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: structured letter therapy. Psychiatry investigation. 2020;17(2):175.

37. Teksin G, Uluyol O.B, Onur O.S, Teksin M.G, Ozdemir H.M. Stigma-related factors and their effects on Health-care Workers during COVID-19 Pandemics in Turkey: A Multicenter Study. Med Bull Sisli Etfal Hosp 2020;54(3):281–290.