

ORIGINAL RESEARCH



The effect of COVID-19 phobia on employee performance and job satisfaction: a cross-sectional study

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Abstract

Background

The mass fear of COVID-19, which is called “coronaphobia”, causes many negative effects such as increasing unemployment rates, decreased performance in working life and organisational problems in the business world. The study is conducted to examine how COVID-19 is reflected in job performance and job satisfaction in terms of the sustainability of occupational health and safety of workers especially white-collar workers, in enterprises due to the pandemic.

Methods

The study was conducted as a descriptive, cross-sectional type. Data were collected from the employees in the designated factories by creating an online form using the “COVID-19 Phobia Scale”, “Employee Performance Scale”, and “Job Satisfaction Scale”.

Results

The findings obtained in the study showed a significant positive relationship between employee performance and job satisfaction. It was determined that job satisfaction and employee performance had a significant but weak relationship with COVID-19 phobia.

Conclusions

The findings expand previous studies by filling the lack of knowledge on how job performance and job satisfaction have effected at workplace during a pandemic. The study data show that job performance and job satisfaction in workplace employees affect each other and that both are affected by unexpected or extraordinary situations such as pandemics.

Keywords: COVID-19 phobia, job performance, job satisfaction, occupational health, nursing.

Introduction

In a process that began with the reporting of pneumonia cases of unknown etiology in Wuhan city in the Hubei province of China in December 2019, it was announced on January 7, 2020 that the agent was a novel coronavirus (2019-nCoV; COVID-19) that had not previously been detected in humans¹. On January 30, 2020, it was reported that the disease was observed in 18 countries around the world², and it was declared as a “pandemic” by the WHO^{3,4}. Labour markets and working life have been at the forefront of the areas affected by the epidemic. While jobs that can be done remotely have continued to be carried out from home to a large extent as part of the quarantine measures taken to reduce the health risk, for jobs that cannot be carried out from home, it was decided in many countries to stop work, except for the essential sectors⁵. During the pandemic process in Turkey, an attempt has been made to control the epidemic with measures such as full closure, partial closure and restrictions, depending on the number of cases in different periods⁶. Authorities have taken measures to reduce the spread of the virus, such as limiting the movement of individuals, closing non-essential stores, imposing a general or local quarantine, as well as physical removal and isolation of vulnerable people⁷. However, while flexible working hours were introduced in the public sector, production lines

and industry continued in the private sector⁸. Although the great majority of jobs in the service sector are more suitable for remote working, the situation is, unfortunately, not the same for workers in the manufacturing process in industrial enterprises⁵. The necessity to continue production, economic concerns and the collective coexistence of employees force employees⁸. The fact that the execution of the job is not suitable for remote working, and that the decision whether or not to continue production is left to the employer due to the adoption of the voluntary quarantine method, while providing the employer with relative flexibility, has exposed the workers employed in this field to a number of risks⁵.

Within the scope of the measures taken against the COVID-19 epidemic that has ravaged the world, the employee, who is a member of society, has to take a number of precautions and comply with the restrictions, both in his/her working life and in his/her social life⁷. In order to minimize the transmission of COVID-19 in business lines where production continues, different applications were made. All these factors, supported by long-term constraints, contributed to reduced employee satisfaction, decreased performance, and inefficient behavior⁷. It is known that these precautions taken in the context of the pandemic can cause important mental health problems such as anxiety, fear, depressive symptoms, loneliness, and sleep disorders.

Because at the end of a cycle in which the causative agent of COVID-19 spreads to three people by three infected people, the disease spreads to 59 thousand people⁴. The spread rate and fatality of the disease affect the work efficiency and phobia of the employees. As well as high contagion and death rates, COVID-19 is producing a universal psychosocial impact by causing mass hysteria, economic burden and financial losses⁹. Throughout the COVID-19 pandemic it has been reported a increase of economic anxiety, caused by the different beliefs of individuals¹⁰. Uncertainty about when the pandemic will end and how it will affect individual lives has led to fear and panic among communities^{11,12}. The mass fear of COVID-19, which is called “coronaphobia”, causes many negative effects in different layers of society⁹. Phobia is an anxiety disorder characterised by persistent, excessive, unrealistic fear towards an object, person, animal, activity or situation. Phobia keeps people away from the triggers of their fear; when such avoidance is not possible, it leads to anxiety and distress¹³. In the study of Philips and Kucera⁸, it was stated that the risk of infection in employees can cause cognitive, affective and behavioral problems. The uncertainty of the role, colleagues, organizational climate and job satisfaction significantly effect the psychological well-being of workers¹⁴.

Previous studies show that the negative effects of the epidemic are not limited to psycho-pathological problems, and that serious physiological, social and economic difficulties due to COVID-19 are observed in various countries. Increasing unemployment rates, decreased performance in working life and organisational problems are important reflections of the epidemic in the business world. Identification of Coronavirus phobia at an early stage is important for providing timely psychological support. In this context, when the current literature is evaluated, it is seen that the studies mostly focus on health workers^{8,15-19}, but there are fewer studies on workers^{5,20}. At the same time, no study was found in which the relationship between COVID-19 phobia and job satisfaction and performance were examined. At the same time, no study was found in which the relationship between COVID-19 phobia and job satisfaction and performance were examined. For these reasons, the relationship between COVID-19 phobia, job satisfaction and job performance was aimed to discuss in this study.

Materials and Methods

The data of this descriptive, cross-sectional study were collected online between 2nd May and 30th June, 2021. The universe of the research of employees employed in enterprises affiliated to the Regional Directorate of the Gaziantep Organized Industrial Zone in Türkiye. There are 145 factories engaged in medium and large scale production in the Organized Industrial Zone of Gaziantep Province in Türkiye. Two factories were determined as a result of the lottery that was drawn among factories. Power analysis was used to calculate the sample size. Based on the population-sample tables in the calculation of the sample size; the sample size to be selected from the population at the 95% and 5% margin for error confidence interval was determined as 384 people. Selection was made using the stratified random sampling method from two factories determined according to the analysis²¹. As a result, 401 employees were included in the research.

Research Questions

1. Does fear of COVID-19 affect employee performance and job satisfaction negatively and significantly?

Measures

Production activities have continued during the pandemic, but due to the restrictions and risk of infection, data were collected using an online questionnaire (<https://docs.google.com/forms/u/0/>). The online questionnaire takes an average of 4-5 minutes to complete. In the first part of the questionnaire, there are 6 questions including the employees' gender, age, marital status, education level, income-expenditure balance and length of employment. In the second part of the questionnaire, the COVID-19 Phobia Scale, the Employee Performance Scale and the Job Satisfaction Scale were used.

COVID-19 Phobia Scale (C19P-S)

This scale was developed by Arpacı et al.²² The C19P-S is a 5-point Likert-type self-assessment scale developed to measure the phobia that may develop against the coronavirus. The scale items are evaluated between (1) “Strongly Disagree” and (5) “Strongly Agree”. Items 1, 5, 9, 13, 17 and 20 evaluate the psychological sub-dimension, items 2, 6, 10, 14 and 18 measure the somatic sub-dimension, items 3, 7, 11, 15 and 19 measure the social sub-dimension; and items 4, 8, 12 and 16 measure the economic sub-dimension. The total C19P-S score is obtained from the sum of the sub-dimension scores and ranges from 20 to 100 points. Higher scores indicate greater phobia in the sub-dimensions and in the general scale. In the Turkish validity and reliability study, a Cronbach's alpha value of 0.926 was found²². A Cronbach's alpha value of .939 was determined for this study.

Employee Performance Scale

The validity and reliability tests of this scale conducted firstly by Kirkman and Rosen²³ and later by Sigler and Pearson²⁴ to measure the performance of employees, were carried out by Çöl²⁵. For the Likert scale used in the research, people are asked to state their opinions about the propositions given from options ranging from very positive to very negative. Accordingly, a scale ranging from (5) “strongly agree”, (4) “agree”, (3) “undecided”, (2) “disagree”, and (1) “strongly disagree” will be used. An increase in the mean score obtained from the scale indicates an increase in the employee's performance. In the Turkish validity and reliability study, a Cronbach's alpha value of .827 was found²⁵. A Cronbach's alpha value of .882 was determined for this study.

Job Satisfaction Scale

This scale, developed by Hackman and Oldham²⁶ and consisting of 14 questions, was implemented to measure job satisfaction. The Turkish validity and reliability of the scale were tested by Gödelek²⁷. The scale can be administered to individuals with different education levels, and all of the items that make up the scale are positively worded. According to the scores that can be obtained in the scale, 14-32 is low, 33-52 is medium, and 53-70 is high. As the score increases, job satisfaction increases. In the Turkish validity and reliability study, a Cronbach's alpha value of .80 was found²⁷.

A Cronbach's alpha value of .916 was determined for this study.

Table 1. Distribution of workers according to their socio-demographic characteristics (N: 401)

Variable		n	%
Gender	Male	296	73.8
	Female	105	26.2
Ages Groups	20-29 ages	223	55.6
	30-39 ages	89	22.2
	40-49 ages	69	17.2
	50 age and above	20	5.0
Marital status	Married	218	54.4
	Single	183	45.6
Education	Primary education	92	22.9
	High school	96	23.9
	Associate degree	103	25.7
	Bachelors degree	89	22.2
	Master's/PhD	21	5.2
Economic satatus	Low	209	52.1
	Middle	133	33.2
	High	59	14.7
Working year(s)	1-5 years	252	62.8
	5-10 years	77	19.2
	10-15 years	42	10.5
	15 and above	30	7.5

Table 2. Workers' Coronavirus 19 Phobia Scale (C19P-S) sub-dimension and total score, Employee performance and Job satisfaction mean scores

	X	SD	*Min.	Max.
C19P-S Total scores	53.87	17.65	20	100
Psychological sub-dimension	19.84	6.30	6	30
Somatic sub-dimension	10.16	4.57	5	25
Social sub-dimension	14.76	5.31	5	25
Economic sub-dimension	9.10	3.95	4	20
Employee performance score	15.71	3.68	4	20
Job satisfaction score	43.84	12.72	14	70

X: Arithmetic Mean, SD: Standard Deviation, *The min and max values represent the lowest and highest scores that can be obtained from the scales.

Ethical considerations

The required permits were taken prior to the study in order to meet the ethical requirements of research.

This study was approved and implemented in collaboration with the Turkey Ministry of Health. Ethical approval was obtained from Gaziantep University Clinical Researches Ethics Committee (Reference No:2021/99). Detailed information about the study's aim and what participation would involve was provided on the first page of the online questionnaire. In addition, informed consents were also taken online from all participants indicating that they volunteered to take part in the study, that they can withdraw at any stage of the survey.

Statistical Analysis

The collected data were analysed using SPSS software version 21. First of all the evaluation of the data, percentage, arithmetic mean and standard deviation (descriptive statistics) were used to examine the employees' descriptive characteristics and the C19P-S sub-dimension and total scores, employee performance and job satisfaction. In the next stage the t-test, ANOVA and Kruskal-Wallis tests were used for comparison of the employees' descriptive characteristics with the C19P-S sub-dimension and total scores, employee performance and

job satisfaction. Finally correlation analysis was performed to determine the relationship between coronaphobia, employee performance and job satisfaction. P values <0.05 were considered to be statistically significant.

Results

It was determined that 73.8% of the factory workers were male, 55.6% were in the 20-29 age group, 54.4% were married, 25.7% were associate degree graduates, 52.1% did not receive an income that met their expenses, and 62.8% had been working for 1-5 years (Table 1).

The total mean score of the employees on the COVID-19 Phobia Scale was 53.87 ± 17.65 . It was found that the mean psychological sub-dimension score of the scale was 19.84 ± 6.30 , the mean somatic sub-dimension score was 10.16 ± 4.57 , the mean social sub-dimension score was 14.76 ± 5.31 , and the mean economic sub-dimension score was 9.10 ± 3.95 , while the mean employee performance score was 15.71 ± 3.68 and the mean job satisfaction score was 43.84 ± 12.72 . The total mean coronaphobia, job satisfaction and employee performance scores of the employees had moderate levels (Table 2).

The mean employee performance and job satisfaction scale scores, and the C19P-S sub-dimension and total scores

Table 3. Comparison findings regarding descriptive features (N:401)

Category	Variable	n	Psychological (X/SD)	Somatic (X/SD)	Social (X/SD)	Economic (X/SD)	C19Ps Total (X/SD)	Performance Total (X/SD)	Satisfaction Total (X/SD)
Gender	Man	296	18.99±6.40	9.92±4.63	14.21±5.37	8.95±4.02	52.07±18.04	15.69±3.76	44.39±12.57
	Woman	105	22.25±5.34	10.87±4.32	16.32±4.78	9.50±3.73	58.94±15.48	15.78±3.44	42.29±13.07
Statistical analysis			t: -4.667* p: .000	t: -1.838 p: .059	t: -3.559 p: .000	t: -1.231 p: .204	t: -3.478 p: .001	t: -.227 p: .813	t: 1.459 p: .154
Marital status	Married	218	20.23±6.58	10.45±4.94	14.79±5.35	9.15±4.23	54.63±18.50	16.02±3.59	43.89±12.68
	Single	183	19.38±5.93	9.82±4.05	14.73±5.25	9.03±3.58	52.96±16.57	15.34±3.75	43.78±12.80
Statistical analysis			t: -1.357 p: .172	t: 1.387 p: .159	t: .125 p: .900	t: .299 p: .762	t: .948 p: .339	t: 1.860 p: .065	t: .093 p: .926
Level of education	Primary education	92	21.07±6.19	11.12±5.16	15.43±5.62	9.62±4.60	57.24±18.86	16.21±3.99	42.41±11.94
	High school	96	19.75±6.92	10.08±4.51	14.32±5.50	9.34±4.21	53.50±18.85	15.10±3.84	43.46±11.61
	Associate degree	103	19.40±6.19	9.79±4.41	15.15±5.31	8.99±3.64	53.32±17.23	15.65±3.66	45.64±13.81
	Bachelor's degree	89	19.61±5.80	9.85±4.05	14.30±4.81	8.55±3.34	52.31±15.44	16.01±3.24	43.22±13.56
	Master's// Doctorate	21	18.10±6.03	9.92±4.65	13.90±4.85	8.52±3.34	50.05±16.56	15.33±2.86	45.62±11.52
Statistical analysis			F: 1.440 p: .220	F: 1.401 p: .233	F: .972 p: .423	F: 1.052 p: .380	F: 1.297 p: .270	F: 1.283 p: .276	F: .981 p: .418
Age	20-29	223	19.58±6.30	9.83±4.18	14.52±5.33	8.92±3.63	52.85±16.97	15.46±3.76	43.61±12.96
	30-39	89	20.21±6.70	10.31±5.40	15.31±5.79	9.47±4.43	55.31±16.76	16.42±3.75	45.10±11.87
	40-49	69	20.03±5.76	10.59±4.22	14.54±4.57	8.97±4.0	54.13±16.40	15.88±3.17	41.30±12.86
	50 and above	20	20.45±6.51	11.75±5.56	15.85±5.18	9.80±4.92	57.85±19.47	14.80±3.79	49.55±11.56
Statistical analysis			KWH: 1.034 p: .793	KWH: 4.305 p: .230	KWH: 2.237 p: .525	KWH: .566 p: .904	KWH: 1.577 p: .665	KWH: 5.919 p: .116	KWH: 7.098 p: .069
Working year(s)	1-5	252	19.53±6.36	9.97±4.52	14.44±5.30	9.01±3.86	52.95±17.54	15.34±3.85	43.30±12.86
	5-10	77	21.01±6.63	11.29±5.02	16.09±5.53	10.05±4.54	58.44±19.20	16.44±3.42	44.48±11.57
	10-15	42	20.26±5.43	9.67±4.14	14.76±5.24	8.48±3.73	53.17±15.93	16.69±2.95	47.50±14.26
	15 and above	30	18.87±5.83	9.60±4.02	14.10±4.40	8.27±2.93	50.83±15.18	15.57±3.31	41.60±11.60
Statistical analysis			KWH: 4.562 p: .207	KWH: 4.911 p: .178	KWH: 5.547 p: .136	KWH: 4.851 p: .183	KWH: 6.094 p: .107	KWH: 7.521 p: .057	KWH: 5.051 p: .168
Economic status	Low	209	20.48±6.31	10.49±4.45	15.13±5.46	9.32±4.09	55.42±17.90	15.71±3.83	40.14±11.59
	Middle	133	19.65±6.14	10.38±4.75	14.88±5.11	9.16±3.69	54.08±17.02	15.29±3.47	46.14±11.73
	High	59	18.00±6.34	8.53±4.28	13.20±4.95	8.17±3.92	47.90±17.12	16.64±3.46	51.76±13.97
Statistical analysis			F: 3.710* p: .025	F: 4.553 p: .011	F: 3.112 p: .046	F: 1.987 p: .138	F: 4.264 p: .015	F: 2.777 p: .063	F: 25.177 p: .000

were compared with the employees' sociodemographic characteristics.

It was determined that there was a significant relationship between the mean psychological, social and total scores of the C19P-S scale according to gender and that these were higher in female workers ($p < 0.05$). A significant relationship was found between the economic status of the workers and the mean psychological, somatic, social and total scores of the C19P-S scale ($p < 0.05$), and that as a result of the post hoc test that was performed, the difference was due to the difference between having an income lower than expenses (low) and having an income higher than expenses (high). A significant relationship was not found between the mean performance, job satisfaction scale scores, and the C19P-S sub-dimension and total scores according to marital status,

level of education, age and working year(s) of (Table 3).

According to the correlation analysis that was made, it was determined that there was a moderately positive relationship between the total score for employee performance and the total score for job satisfaction. A strong positive relationship was determined between the total score for employee performance and the somatic sub-dimension. Although the total score for employee performance and total score for job satisfaction showed significance with the other sub-dimensions, it was seen that the relationship was weak or non-existent. Since there was a very high positive correlation between the total C19P-S and its psychological, somatic, social and economic sub-dimensions, while the score of the C19P-S sub-dimensions increased, the total score of the C19P-S also increased. It was seen that there was also a moderate and high level of positive correlation between

Table 4: Relationship between Workers' Coronavirus 19 Phobia (C19P-S), Employee Performance and Job Satisfaction

		Job Satisfaction Total Score	Performance Total score	Total C19Ps	Psychological	Somatic	Social	Economic
Job Satisfaction Total Score								
Performance Total score	r	0.402						
	p	0.000						
Total C19Ps	r	0.120	0.199					
	p	0.016	0.000					
Psychological	r	0.093	0.262	0.887				
	p	0.063	0.000	0.000				
Somatic	r	0.095	0.075	0.828	0.566			
	p	0.058	0.134	0.000	0.000			
Social	r	0.119	0.202	0.934	0.829	0.686		
	p	0.017	0.000	0.000	0.000	0.000		
Economic	r	0.118	0.115	0.839	0.601	0.719	0.712	
	p	0.018	0.021	0.000	0.000	0.000	0.000	

the C19P-S sub-dimensions. Although job satisfaction and employee performance showed significance with COVID-19 phobia, it was determined that the relationship between them was weak (Table 4).

Discussion

Within the framework of the current study, coronaphobia, employee performance and job satisfaction of factory employees who continued their activities during the pandemic were investigated. Since the COVID-19 pandemic has entered in our lives, great changes have occurred. It is observed that COVID-19 causes many psychological problems due to its potential for easy transmission, rapid spread, lack of treatment and high levels of virus-related deaths²⁸⁻³⁰. The COVID-19 epidemic has a negative effect on people's lives, causing stress, panic, anxiety, depression and phobic reactions in people^{22,28,31-35}. It is emphasized that most of the employees have difficulty in adapting to this new situation and conditions. Happier situations have occurred in some business sectors where only employees can work remotely³⁶. It is known that the precautions taken during pandemic periods prevent many risks in terms of physical health, but create certain psychological side effects³⁷. During COVID-19 pandemic, individuals' emotional reactions tend to comprise extreme fear and confusion¹⁷. In the study of Wade and Valaskova¹², it was stated that psychiatric symptoms, significant depression, extreme anxiety and burnout syndrome may develop in healthcare workers due to the increased responsibility and workload due to COVID-19¹⁸. Individuals stay away from other individuals who become sick and/or are quarantined, and approach them with fear and suspicion³⁷. In the current study, the total score of the participants on the COVID-19 phobia scale was determined as 53.87 ± 17.65 . Oktay et al.¹⁵ found the mean C19P-S score to be 50.1 ± 17.3 , which is conducted with healthcare professionals. In a different study which is carried out with university students, it was reported that moderate fear symptoms were observed in students³⁸. Our study result is compatible with the literature. The scale does not have a cut-off score and the maximum score that can be obtained is 100. Although no cut-off was made since higher scores indicated greater phobia, our results can be interpreted to say that factory workers had moderate levels of coronaphobia. Exclusion of the employees in the business lines where the production continues in the traditional way, continuing

to work in the business environment, being in the same environment of the employees, may cause the development of phobia in the employees due to the transmission route of the disease.

In the current study, the relationship between gender and the C19P-S total, and psychological and social sub-dimensions was significant ($p < 0.05$). Women's scores were higher in all three groups. In a study conducted with doctors in Pakistan, it was determined that female employees had greater phobia³⁹. In a study carried out by Karaköse et al.⁴⁰ with school administrators, it was determined that women had greater COVID-19 phobia. In different studies, it is reported that women's C19P-S scale sub-dimensions and total scores are higher than those of men⁴¹⁻⁴³. Women's roles in family and child care in traditional societies may be one reason for their higher levels of coronaphobia. In their study evaluating psychological risk factors during the COVID-19 process, Horesh et al.⁴⁴ stated that being a woman is an important risk factor. The current study finding is compatible with the literature. In the literature, it is stated that during the COVID 19 pandemic, women are more affected than men by the COVID-19 news appearing on social media, and that anxiety disorders are three times more prevalent in women than men⁴⁴⁻⁴⁶. Considering the literature information and the findings of our study, it is thought that the studies to be carried out should be planned on supporting women in such extraordinary situations. In the planning to be made from now on, it is necessary to prioritize the support of women among the workers.

During the epidemic, production and work in many sectors changed in the form of remote work or of taking a break from work for a while⁴⁷. This situation did not last long, and business activities continued according to countries' economic conditions, number of cases and production sector. Employees encounter a high risk of contamination and infection due to the increase in cases. Along with the fear of becoming infected, employees are left alone with the fear of economic loss due to not being able to go to work when they become ill¹⁶. In the study, the relationship of economic status with psychological, somatic, social and total C19P-S scores was found to be significant. In the current study, it was determined that those with low income levels had greater phobia. In the event of contracting or coming into contact with COVID-19, quarantine is implemented and people

cannot go to work. This fear may have been caused by the fact that the incomes of low-income employees, which are already insufficient, will decrease even further due to not being able to go to work if they become ill.

In many countries of the world, governments have encouraged employers to switch to teleworking in order to contribute to physical distancing by reducing congestion in big cities⁴⁷. It is important to understand the mechanisms that support positive mental health beyond the safety of the work environment. Employees in production branches continued to come to their workplaces. However, as a result of the changes caused by the epidemic in this process, employees' anxiety, changes in stress risk perception, isolation, stigma, and discrimination have increased significantly⁴⁸. However, since the economic situation of our country is not suitable for long-term business interruptions, and industrial production is continued even in times of restriction, factory workers have been exposed to negative situations such as fear of infection, increased workload, job dissatisfaction, and performance problems. In the current study, the participants' total score on the employee performance scale was determined as 15.71 ± 3.68 . Our results can be interpreted to say that factory workers had moderate employee performance levels. In the current study, the participants' mean job satisfaction score was found to be 43.84 ± 12.72 . The maximum score that can be obtained from the scale is 70. The current study results can be interpreted to say that factory workers had moderate job satisfaction levels. In a study conducted by Oflezer et al.⁴⁹ on employees during the pandemic period, the job satisfaction score was found to be 44.3. The current study finding is compatible with the literature.

A significant relationship was not found between job satisfaction and employee performance according to age groups, but it was determined that for employees aged over 50, job satisfaction was higher while the employee performance score was lower. Because the age of employees is a factor that affects their behaviours, perceptions and decisions, their thoughts and attitudes towards their job may change depending on their age⁵⁰. Similar to the results of the current study, Said and El-Shafei⁵¹ did not find a significant relationship between age and job satisfaction in their study with health workers, but they found a significant relationship with COVID-19-associated stressors. Al-Aameri⁵² argued that older employees have higher job satisfaction than younger employees. The literature also confirms this⁵³⁻⁵⁶. Factors such as decrease in working energy and early fatigue due to the employee's age can be shown as reasons for low job performance over the age of 50.

A significant relationship was found between job satisfaction and economic level, and it was determined that those with higher income levels had higher job satisfaction. This situation can be explained by the fact that compared to employees with a low income level, those with a high income level achieve greater satisfaction with the thought that they receive a greater reward for their labour. Similarly, it can be said that the high level of job satisfaction of employees with a high level of education is due to their participation in working life as a qualified workforce at the end of the education they have received, and to the fact that as a result of this, the investment they have made in education is returned as a reward for the time spent, a high income level and improvement in other working conditions⁵⁰.

In this period, the rate of facing the risk of COVID-19

increases in business lines where production continues. This situation can affect job satisfaction and performance both directly and indirectly. In our study, it was determined that job satisfaction and performance showed significance with COVID-19 phobia, but that the relationship was weak. Precautions taken in the working environment have had a positive effect on the mental health and work performance of employees during the COVID-19 outbreak. In a similar study, it was reported that increasing measures in the work environment negatively affected employees' anxiety, but positively affected their job satisfaction²⁰. The increase in the rate of transmission of the disease, the emergence of mutant viruses and the shift of the incidence to earlier ages may cause an increase in employees' phobias towards the disease. It is thought that this situation affects job satisfaction and performance.

Conclusion

In conclusion, this study offers a new perspective on previous research about the importance of COVID-19 phobia, job satisfaction and job performance. It was determined that the scales scores of the employees were at a moderate level for COVID-19 phobia, job satisfaction and job performance. It is thought that especially gender and economic status indicators are significant variables and should be taken into account within the scope of studies to be planned specific to this area. The lack of studies conducted in this context shows that the results of the study will make significant contributions to the literature. In addition, it reveals that an increase in employees' job satisfaction will increase their work performance by increasing their commitment to the organisations they work for, and will increase productivity for employers and employees. While it is inevitable that this situation is negatively affected due to COVID-19 phobia in the current pandemic process, the research carried out is of great importance in terms of analysing and understanding this situation well in order to manage it. This research gives a clear message for all policy makers, scientists, managers and employees to give the necessary importance to job satisfaction and job performance during the COVID-19 period. Also occupational health nurses, and staff nurses need to work for achieving high job satisfaction and high job performance by reducing the anxiety of employees in their working lives and which were effected during the pandemic.

Limitations

The current study also had some limitations. The voluntary nature of the study may have resulted in selection bias. It is thought that the cross-sectional design of the study might have limited the evaluation of the effect of time on coronaphobia levels. The fact that data was collected online during data collection provided the opportunity to fill in the forms at the appropriate time. In this context, workers who have a heavy workload and are in busy working hours are not under the pressure of responding in a short time like the face-to-face data collection method. Allowing flexible time is thought to increase the recall and analysis power of workers. It is thought that with this method, the possibility of sharing more accurate and reliable information may increase.

At present, studies on the COVID-19 pandemic mostly concentrated on prevention and control, epidemiological investigation, diagnosis, and treatment. Or more focused on healthcare workers. It is thought that future research should aim to plan studies on the effects of the pandemic, taking

into account the problems experienced by workers in various business lines and supporting them.

Conflicts of interest

None.

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References

1. European Centre for Disease Prevention and Control. (ECDC) Rapid Risk Assessment: Outbreak of acute respiratory syndrome associated with a novel coronavirus, Wuhan, China; first update–22 January 2020. ECDC: Stockholm; 2020. Available from: <https://www.ecdc.europa.eu/sites/default/files/documents/Risk-assessment-pneumonia-Wuhan-China-22-Jan-2020.pdf>
2. WHO. Novel Coronavirus (2019-nCoV) Situation Report–10. Available from: https://www.who.int/docs/default-source/coronavirus/situation-reports/20200130-sitrep-10-ncov.pdf?sfvrsn=d0b2e480_2
3. Aslan R. Tarihten günümüze epidemiler, pandemiler ve COVID-19. Göller Bölgesi Aylık Ekonomi ve Kültür Dergisi Ayrıntı. 2020; 8(85):35-41. Available from: <https://www.dergiayrinti.com/index.php/ayr/article/view/1353>
4. Sakaoglu HH, Orbatu D, Emiroglu M, Çakır Ö. COVID-19 salgını sırasında sağlık çalışanlarında spielberger durumluk ve sürekli kaygı düzeyi: Tepecik hastanesi örneği. Tepecik Eğit. ve Araşt. Hast. Dergisi. 2020;30:1-9. Doi:10.5222/terh.2020.56873
5. Delen MG, Peksan S. COVID-19 ve işçiler salgının ilk döneminde sanayi işletmelerinde çalışan sendikali işçiler (Mavi Yakalılar), 2020. Available from: <https://cdn.istanbul.edu.tr/FileHandler2.ashx?f=ikam-mavi-yakalilar-rapor.pdf>
6. Doğan N. 13 soruda tam kapanmada çalışanların hakları, 2021. Available from: <https://www.hurriyet.com.tr/yazarlar/noyan-dogan/13-soruda-tam-kapanmada-calisanlarin-haklari-41799180>
7. Nemteanu MS, Dabija DC. The influence of internal marketing and job satisfaction on task performance and counterproductive work behavior in an emerging market during the COVID-19 pandemic. International Journal of Environmental Research and Public Health. 2021;18(7):3670. <https://doi.org/10.3390/ijerph18073670>
8. Phillips, A., and Kucera, J. extreme anxiety, illness fears, and acute stress in COVID-19 frontline healthcare professionals. Psychosociological Issues in Human Resource Management. 2021; 9(2): 35–48. doi: 10.22381/pihrm9220213.
9. Dubey MJ, Ghosh R, Chatterjee S, Biswas P, Chatterjee S, Dubey S. COVID-19 and addiction. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 2020;14(5):817-823. Doi: <https://doi.org/10.1016/j.dsx.2020.05.035>
10. Fetzer T, Hensel L, Hermle J, and Roth C. Coronavirus perceptions and economic Anxiety. The Review of Economics and Statistics. 2020;1-36. https://doi.org/10.1162/rest_a_00946
11. Nicomedes CJC, and Avila RMA. An analysis on the panic during COVID-19 Pandemic through an online form. Journal of Affective Disorders. 2020;14-22. <https://doi.org/10.1016/j.jad.2020.06.046>
12. Zhang J, Wu W, Zhao X, and Zhang W. Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: A Model of West China Hospital. Precision Clinical Medicine. 2020;3(1): 3-8. <https://doi.org/10.1093/pcmedi/pbaa006>
13. American Psychiatric Association (APA). Diagnostic and statistical manual of mental disorders (DSM-5). 2019. American Psychiatric Publication.
14. Miron, D, Petcu, MA, David-Sobolevski MI and Cojocariu RC. A multidimensional approach of the relationship between teleworking and employees well-being – Romania during the pandemic generated by the Sars-Cov-2 Virus. Amfiteatru Economic. 2021; 23(58):586-600.
15. Oktay Aslan B, Batum Ö, Varol Y, Şenel E, Uçar ZZ. COVID-19 phobia in healthcare workers; a cross-sectional study from a pandemic hospital. Tuberk Toraks. 2021;69(2):207-216
16. Kang L, Li Y, Hu S, Chen M, Yang C, Yang BX et al. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. The lancet. Psychiatry. 2020;7(3):e14. Doi: [https://doi.org/10.1016/S2215-0366\(20\)30047-X](https://doi.org/10.1016/S2215-0366(20)30047-X)
17. Thompson D. Psychological Trauma Symptoms and Mental Conditions of Medical Staff during the COVID-19 Pandemic: Severe Stress, Elevated Anxiety, and Clinically Significant Depression. Psychosociological Issues in Human Resource Management. 2020;8(1): 25–30. doi:10.22381/PIHRM8120204
18. Wade, K., and Valaskova, K. Acute Depression, Moral Dilemmas, and Illness Fears in COVID-19 Frontline Healthcare Providers. Psychosociological Issues in Human Resource Management. 2021; 9(2): 91–104. doi: 10.22381/pihrm9220217.
19. Said RM, El-Shafei DA. Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. Environ Sci Pollut Res Int. 2021;28(7):8791-8801. doi: 10.1007/s11356-020-11235-8.
20. Sasaki N, Kuroda R, Tsuno K, Kawakami N. Workplace responses to COVID-19 associated with mental health and work performance of employees in Japan. J Occup Health. 2020;62:e12134. Doi: <https://doi.org/10.1002/1348-9585.12134>
21. Yazıcıoğlu, Y. ve Erdoğan, S. SPSS uygulamalı bilimsel araştırma yöntemleri. 2014, İstanbul: Detay Yayınevi.
22. Arpacı İ, Karataş K, Baloglu M. The development and initial tests for the psychometric properties of the COVID-19 Phobia Scale (C19P-S). Personality and individual differences. 2020;164:110108. Doi: <https://doi.org/10.1016/j.paid.2020.110108>.
23. Çöl G. Algılanan güçlendirmenin işgören performansı üzerine etkileri. Doğu Üniversitesi Dergisi. 2008;9:35-46. Available from: <http://journal.dogus.edu.tr/index.php/duj/article/view/77/92>
24. Gödelek E. Üç farklı iş kolunun psiko-sosyal stres faktörleri yönünden karşılaştırılması Doktora Tezi. Ankara Üniversitesi Eğitim Bilimleri Fakültesi, Ankara 1988. Available from: <https://dspace.ankara.edu.tr/xmlui/bitstream/handle/20.500.12575/34791/010654.pdf?sequence=1&isAllowed=y>
25. Duan L, Zhu G. Psychological interventions for people affected by the COVID-19 epidemic. The Lancet Psychiatry. 2020;7(4):300-302. Doi: 10.1016/S2215-0366(20)30073-0
26. Gao J, Zheng P, Jia Y, Chen H, Mao Y, Chen S, et al. Mental health problems and social media exposure during COVID-19 outbreak. PLoS One. 2020;15(4):e0231924. Doi: <https://doi.org/10.1371/journal.pone.0231924>
27. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirusdisease (COVID-19) outbreak. Journal of Autoimmunity. 2020;109:102433. Doi: <https://doi.org/10.1016/j.jaut.2020.102433>
28. Li W, Yang Y, Liu ZH, Zhao YJ, Zhang Q, Zhang L, et al. Progression of mental health services during the COVID-19 outbreak in China. International Journal of Biological Sciences. 2020;16(10):1732-1738. Doi: <https://doi.org/10.7150/ijbs.45120>
29. Wang C, Cheng Z, Yue XG, McAleer M. Risk management of COVID-19 by universities in China. Journal of Risk and Financial Management. 2020;13(2):36. Doi: <https://doi.org/10.3390/jrfm13020036>
30. 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):175–176. Doi: <https://doi.org/10.30773/pi.2020.0047>
31. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID 19 epidemic: implications and policy recommendations. *General Psychiatry*. 2020;33(2). Doi: <https://dx.doi.org/10.1136%2Fgpsych-2020-100213>
32. Ahorsu DK, Lin CY, Imani V, Saffari M, Griffiths MD, Pakpour AH. The Fear of COVID- 19 Scale: development and initial validation. *International Journal of Mental Health and Addiction*. 2020. Doi: <https://doi.org/10.1007/s11469-020-00270-8>
33. Nemțeanu MS, Dinu V, Pop RA, and Dabija DC. predicting job satisfaction and work engagement behavior in the COVID-19 pandemic: A conservation of resources theory approach. *Business Administration and Management*. 2022; 25(2):23–40. doi. org/10.15240/tul/001/2022-2-002
34. Durak Batıgün A, Şenkal Ertürk İ. Çok Boyutlu COVID-19 Ölçeği geliştirme, geçerlik ve güvenilirlik çalışması. *Nesne*. 2020;8(18):406-421. Doi: <https://doi.org/10.7816/nesne-08-18-04>
35. Martínez-Lorca M, Martínez-Lorca A, Criado-Álvarez JJ, Armesilla MDC, Latorre JM. The fear of COVID-19 scale: Validation in spanish university students. *Psychiatry Res*, 2020;293:113350. doi: 10.1016/j.psychres.2020.113350
36. Malik S, Ullah I, Irfan M, Ahorsu DK, Lin CY, Pakpour AH, et al. Fear of COVID-19 and workplace phobia among Pakistani doctors: A survey study. *BMC Public Health*. 2021;21:833 Doi: <https://doi.org/10.1186/s12889-021-10873-y>
37. Karaköse T, Yarci R, Papadakis S. Exploring the interrelationship between COVID-19 phobia, work–family conflict, family–work conflict, and life satisfaction among school administrators for advancing sustainable management. *Sustainability*. 2021;13(15):8654. Doi: [doi: 10.3390/su13158654](https://doi.org/10.3390/su13158654)
38. Karaca Y, Kalaycı MC. Attitudes of individuals who participate in recreative mountain and nature sports towards COVID-19 phobias. *Turkish Journal of Sports Medicine*. 2021;50(4):152-158. Doi: <http://dx.doi.org/10.47447/tjsm.0517>
39. Karaca Y, Selçuk MH, Kalaycı MC. Examination of COVID-19 phobias of physical education teachers. *Türkiye Klinikleri J Sports Sci*. 2021;13(2):292-301. Doi: 10.5336/sportsci.2020-80011
40. Delibaş L. COVID-19 phobia and intensity of anxiety; a vocational school example. *Journal of Pre-Hospital*. 2021;6(2):201-212. Available from: <https://dergipark.org.tr/tr/pub/hod/issue/64854/863280>
41. Horesh D, Kapel Lev-Ari R, Hasson-Ohayon I. Risk factors for psychological distress during the COVID-19 pandemic in Israel: Loneliness, age, gender, and health status play an important role. *British journal of health psychology*. 2020;25(4):925–933. Doi: <https://doi.org/10.1111/bjhp.12455>
42. Özdin S, Bayrak Özdin Ş. Levels and predictors of anxiety, depression and health anxiety during COVID-19 pandemic in Turkish society: The importance of gender. *International Journal of Social Psychiatry*. 2020;66(5):504-511. Doi: <https://doi.org/10.1177/0020764020927051>
43. Laato S, Islam AKM, Islam MN, Whelan E. Why do people share misinformation during the COVID-19 pandemic?. *European Journal of Information Systems*. 2020;29(3):288-305. Doi: <https://arxiv.org/ftp/arxiv/papers/2004/2004.09600.pdf>
44. International Labour Organization (ILO). X COVID-19 ortamında ve sonrasında uzaktan çalışma uygulama kılavuzu. 2020. Available from: https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---ilo-ankara/documents/publication/wcms_759299.pdf
45. Bulińska-Stangrecka H, Bagińska A. The role of employee relations in shaping job satisfaction as an element promoting positive mental health at work in the era of COVID-19. *International Journal of Environmental Research and Public*. 2021; 18(4):2-18. Doi: <https://doi.org/10.3390/ijerph18041903>
46. Oflezer C, Ateş M, Bektaş G, İrbán A. Bir kamu hastanesinde çalışan işçilerin iş doyumunu ve etkileyen faktörler. *Acıbadem Üniversitesi Sağlık Bilimleri Dergisi*. 2011;(4):203-214. Available from: <http://journal.acibadem.edu.tr/en/download/article-file/1701320>
47. Nergiz E, Yılmaz F. Çalışanların iş tatmininin performanslarına etkisi: Atatürk Havalimanı gümrüksüz satış işletmesi örneği. *Kastamonu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*. 2016;14(4):50-79. Available from: <https://dergipark.org.tr/tr/pub/iibfdkastamonu/issue/29650/318426>
48. Said RM, El-Shafei DA. Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. *Environ Sci Pollut Res*. 2021;28:8791–8801. <https://doi.org/10.1007/s11356-020-11235-8>
49. Al-Aameri AS. Job satisfaction and organizational commitment for nurses. *Saudi medical journal*. 2000; 21(6):531-535.
50. Hulin CL, Smith PC. A linear model of job satisfaction. *Journal of Applied Psychology*. 1965;49(3):209–216. Doi: <https://doi.org/10.1037/h0022164>
51. Gibson JL, Klein SMM. Employee attitudes as a function of age and length of service: A reconceptualization. *Academy of Management Journal*. 1970;13(4):411-425. Doi: <https://doi.org/10.2307/254831>
52. İlgün E. İnfaz Koruma Memurlarının İş Doyumu ve Tükenmişlik Düzeylerinin Bazı Değişkenler Açısından İncelenmesi, Yayımlanmamış Yüksek Lisans Tezi, 2010 Konya: Selçuk Üniversitesi Sosyal Bilimler Enstitüsü.
53. Yiğit R, Dilmaç B, Deniz M. İş ve yaşam doyumunu: Konya Emniyet Müdürlüğü alan araştırması. *Polis Bilimleri Dergisi*. 2011;13(3):1-18. Available from: https://arastirmax.com/en/system/files/dergiler/295/makaleler/13/3/arastirmx_295_13_pp_1-18.pdf