



IS THERE A CHANGE IN OCCUPATIONAL BALANCE AND QUALITY OF LIFE OF UNIVERSITY STAFF WITH OR WITHOUT COVID-19?

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ABSTRACT

Purpose: During the COVID-19 pandemic, occupational balance, and quality of life (QoL) were affected by many professions, and university staff were faced with changing living conditions experienced due to the pandemic. This study aims to investigate whether these new situations cause changes in occupational balance and QoL in university personnel with and without COVID-19.

Material and Methods: The Turkish Occupational Balance Questionnaire 11 (OBQ11-T) was used to evaluate occupational balance in university staff, and the Professional Quality of Life Scale (ProQoL) was used to evaluate the QoL. Participants who had COVID-19 were accepted as the study group and participants who hadn't COVID-19 were included in the control group. Independent t-test and Kruskal-Wallis tests were used in the statistical analysis of the data.

Results and Conclusions: The compassion satisfaction subscale of ProQoL scores of university staff who had COVID-19 were found to be significantly lower than those of the control group ($p=0.038$). The burnout level of the COVID-19-positive academic staff was significantly higher than the administrative staff ($p=0.028$). OBQ11-T scores were found to be significantly lower in males with COVID-19 compared to females with COVID-19 ($p=0.043$). Occupational balance and QoL scores were affected in university staff who had COVID-19.

Keywords: COVID-19; occupational balance; quality of life; professional quality of life scale; university staff

COVID-19 OLAN VE OLMAYAN ÜNİVERSİTE PERSONELİNİN OKUPASYONEL DENGESİNDE VE YAŞAM KALİTESİNDE BİR DEĞİŞİM VAR MI?

ÖZET

Amaç: COVID-19 pandemisi sürecinde birçok meslek grubunun okupasyonel denge ve yaşam kalitesi etkilenmiş, üniversite çalışanları pandemi nedeniyle değişen yaşam koşulları ile karşı karşıya kalmıştır. Çalışmanın amacı, bu yeni durumların COVID-19 olan ve olmayan üniversite personelinde okupasyonel denge ve yaşam kalitesinde değişikliklere neden olup olmadığını araştırmaktır.

Gereç ve Yöntem: Üniversite personelinde okupasyonel dengeyi değerlendirmek için Türkiye Okupasyonel Denge Anketi 11 (OBQ11-T), yaşam kalitesini değerlendirmek için Çalışanlar için Yaşam Kalitesi Ölçeği (ÇYKÖ) kullanıldı. COVID-19 olan katılımcılar çalışma grubu olarak kabul edildi ve COVID-19 olmayan katılımcılar kontrol grubuna dahil edildi. Verilerin istatistiksel analizinde bağımsız t-testi ve Kruskal-Wallis testleri kullanıldı.

Sonuçlar ve Tartışma: COVID-19 olan üniversite personelinin ÇYKÖ puanlarının merhamet memnuniyeti alt ölçeği kontrol grubuna göre anlamlı olarak düşük bulundu ($p=0,038$). COVID-19 pozitif olan akademik personelin tükenmişlik düzeyi, idari personele göre anlamlı olarak yüksekti ($p=0,028$). OBQ11-T puanları COVID-19'lu erkeklerde COVID-19'lu kadınlara göre anlamlı olarak düşük bulundu ($p=0,043$). COVID-19 geçiren üniversite personelinde okupasyonel denge ve yaşam kalitesi puanları etkilendi.

Anahtar Kelimeler: COVID-19; okupasyonel denge; yaşam kalitesi; iş yaşam kalitesi ölçeği; üniversite personeli

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Since COVID-19 emerged in 2019, it has made it necessary to make changes in many areas of life. People faced challenges like quarantine, and social isolation during home and online working and teaching (1). Despite these changes in very important service areas such as health and education during the COVID-19 pandemic, the maintenance of these services has become one of the most important issues worldwide. As in health services, the fact that education activities at all levels first stopped and then continued by changing shape caused education services to differ during the pandemic. This difference has forced the development of new adaptations in employees. However, taking mandatory precautions worldwide due to COVID-19 infection in employees seems to have affected the occupational balance and quality of life (2,3-5).

Quarantine of people with COVID-19 infection to prevent transmission also causes social isolation, causing psychological effects that increase the physical effects of the disease (2,3). Staying at home has affected both lifestyles and daily habits. Most employees have moved their workplaces to their homes during these restrictions. Moving the working environment to the home has led to the formation of a new working order, and although this new working style, in which the boundaries of work and home life have disappeared, has brought some benefits, it has also brought with it many different effects such as depression, anxiety, occupational imbalance, etc. (4,5). A significant portion of the university staff could not make lifestyle changes like those taking place worldwide as a result of the measures taken by the Ministry of Health during the COVID-19 pandemic in Turkey. Although the academic education in universities is carried out over the internet and remotely, a significant part of the academic staff, especially, continued to work under the roof of the university and in physical working environments (13,14). Except for the curfew periods, academic and administrative staff continued their work in the university building for a significant part of the pandemic process (10). This unstable and dynamic process in lifestyle change has added an obligation to the academic and administrative staff working under the roof of the university to adapt to the constant change in their lifestyles. In addition, it is known that physical functions are affected during and after the disease due to the emergence of a wide variety of symptoms in people who have had COVID-19 infection (6,7). It is thought that the employees' return-to-work performance and

occupational balance are impaired due to the infection (5-11). Occupational balance can also be defined as the situation where there is a positive distribution between the number of occupations and occupational areas (12). A person with occupational balance can be defined as a person who is satisfied with the balance in their living spaces and achieves well-being (13-15). Factors such as life satisfaction and quality can affect the maintenance of this balance by preventing access to resources necessary for subjective health (16,17). The most important factors that may cause the deterioration of this balance are underemployment and extremely limited living conditions (16). In both cases, the activity areas, roles, personal factors, and environmental factors are required for occupational balance change, and it is observed that occupational balance deteriorates with this change (18-20). It is thought that these changes have important effects on the preservation of occupational balance and the quality of life, which is a concept that people can achieve with a balanced life. When the studies conducted with university employees were examined recently, it was observed that most of the studies only included academic personnel and focused on the difficulties encountered during the COVID-19 pandemic and work-life balance (21,22-24). It has been noticed that the administrative staff is excluded from the studies, and there is limited focus on whether having a COVID-19 infection influences the quality of life and occupational balance of the university staff. To the best of our knowledge, no study has been found examining the effects of having a COVID-19 infection on the quality of life of university staff. (8-14). With this aspect, our results also lay the groundwork for the necessity of occupational therapy interventions to be developed to overcome this negative effect on university personnel who have had COVID-19 (9-19). This study, which compares the experiences of personnel who have COVID-19 infection and who work remotely for precautionary purposes during the quarantine period, and other personnel who continue to work in the office environment, was carried out to investigate the topics that will draw attention to the difference in the working environment during the pandemic period (25-26). Therefore, the aim of this study is to investigate the effect of occupational balance and quality of life on the variables of age, gender, occupations, severity of COVID-19 infection in academic and administrative university personnel infected or not infected by COVID-19.

MATERIAL AND METHODS

This study, carried out by the Declaration of Helsinki, was approved by the Atlas University Non-Interventional Scientific Research Ethics Committee with protocol number 2021/05, on 15.02.2021. For this study, which is based on volunteerism, the consent of each participant was obtained by filling out a voluntary consent form. Participants were informed that they had the right not to complete the questionnaire and to withdraw from the study at any time.

The study was designed as a prospective cross-sectional descriptive study with the participation of volunteers consisting of administrative and academic staff. The data were collected over the internet between March 1 and May 30, 2021, by interviewing the participants in their working environment or using Google Form by online survey method. The online questionnaires were sent to the participants via social networks such as WhatsApp, Instagram, Twitter, and Telegram.

We included the individuals who are healthy, work as academic or administrative personnel at the universities, are aged 18 and over, have sufficient cognitive skills to answer the questions, have no mental disabilities, and had or had not COVID-19 infection. Individuals working in shifts were excluded from the study. University personnel who had COVID-19 infection were determined as the study group, whereas personnel who did not have COVID-19 infection were determined as the control group. The sample size of the study was calculated as 65 people with an error of 0.05 and a reliability level of 0.95 as a result of the power analysis using the G*Power 3.1.9.4 software program.

All participants completed the questionnaire consisting of 3 parts in total, including demographic characteristics, occupational balance, and quality of life. To the participants, the demographic information form prepared by the researchers, the Occupational Balance Questionnaire-Turkish Version 11 (OBQ-T11) scale to measure the occupational balance, and the Professional Quality of Life Scale (ProQoL) to measure the quality of life were applied.

The dependent variable of the study is Covid-19 status, and its independent variables are age, gender, type of occupation, OBQ11-T scores and compassion satisfaction, burnout, and compassion fatigue, which are subscales of ProQoL.

The size of the study was determined by the number of participants that the researchers could reach during the study period. The study size is not expectedly large.

Information about the demographic variables of the participants was obtained with the Demographic Information Form prepared by the researchers. With the Demographic Information Form, information such as age, gender, occupation, whether people had COVID-19 infection, and if so, its severity was obtained. Smoking and alcohol use, average salary, and lifestyle were also questioned in the form.

Occupational Balance Questionnaire (OBQ) was developed by Wagman and Håkansson as a self-report tool to assess occupational balance (17). The new version of OBQ (OBQ11) is a scale in which the individuals evaluate themselves subjectively and the researchers can measure the occupational balance which is the distribution of the different occupational roles. The intended use of this scale is to measure the satisfaction of the individuals in daily life activities regarding their occupational balance and the amount of satisfaction.

The Turkish validity and reliability study of the latest version of the scale (Turkish Occupational Balance Questionnaire [OBQ11-T]) was carried out by Günel et al. Cronbach's alpha value was found to be 0.785. Validity and reliability studies have shown that the questionnaire conducted in healthy individuals aged 18 and over has good internal consistency (27). Consisting of 11 items, the scale has a 4-point Likert-type scoring (0-3). The total score is between 0-33. Higher scores indicate a better occupational balance.

Professional Quality of Life Scale (ProQoL) was developed by Stamm et al. (2005) as a self-evaluation scale that measures the quality of life (see also; www.ProQoL.org). The scale consists of 3 sub-dimensions: compassion satisfaction, burnout, and compassion fatigue. The scale, which consists of 30 items, has a 6-point Likert-type scoring (0=Never and 5=Very often).

The *compassion satisfaction* subscale expresses the satisfaction felt by the employee as a result of helping another person who needs help in a field related to his/her profession. High scores in this section indicate the level of satisfaction as a helper. The *burnout* subscale measures the feeling of burnout that occurs with hopelessness and difficulties in coping with problems in business life. High scores in this section indicate a high level of burnout. The *compassion fatigue* subscale measures the symptoms that occur as a result of encountering stressful events. Employees who score high on this scale are recommended to receive support and assistance in this regard.

Turkish validity and reliability of this scale (ProQoL R-IV) were performed by Yeşil et al. (2010) by applied to emergency nurses. The Cronbach alpha value of the scale was determined as 0.84 (28).

Evaluation of the obtained data was analysed with the SPSS.20 program. The statistical significance level was accepted as $p < 0.05$ in all analyses. The "Shapiro-Wilk Test" was used to determine the conformity of the data to the normal distribution. All the values have a normal distribution except the age, OBQ11-T total scores, and moderate disease severity in the Covid-19 positive group. Parametric independent sample t-test was applied to the control and study group data, which were normally distributed. Analyses were advanced within the study group that had experienced COVID-19. The non-parametric Kruskal-Wallis test was used because there were more than three groups and data that did not fit the normal distribution in the "severity" variable. Also, Pairwise Comparison was applied to see between severity groups' relation. Since variables such as occupation type and gender showed normal distribution, an independent sample t-test was used for the analysis.

We preferred to use the total score of OBQ11-T in our analysis. The sensitivity analysis results of both evaluation tools used are given above. There is no missing data in the data collected for the study.

RESULTS

Participants were allocated to the study group including academic and administrative staff who had been infected with COVID-19 in different universities ($n=31$) and the control group, which included academic and administrative staff who had not been infected with COVID-19 ($n=46$). Study group included 24 (77.4%) female and 7 (22.6%) male participants 27 (25.7%) with a mean age of 34.94 (standard deviation [SD]=10.09) years. The control group included 31 (67.4%) female and 15 (32.6%) male participants with a mean age of 35,91 (SD=9.16) years. No significant differences were found between the groups regarding age, gender, and occupation ($p > 0.05$). Characteristics of demographic information are presented in Table 1. In demographic information form, the severity of COVID-19 symptoms also investigated. Participants were asked to choose one of 4 different intensities to measure the severity of the infection: "I did not feel affected", "mild", "moderate" and "severe". Out of the 31 participants, 2 reported not affected (6.45%), 10 reported mild (32.25%), 17 reported moderate (54.83%),

and 2 reported severe (6.45%) severity. Then, demographic information, occupational balance, and quality of life scores were analysed. There is no missing data.

Table 1. Descriptive information of study and control groups

		Gender		Occupation	
COVID-19 Status	Study Group (Infected)	Female	Male	Academic	Administrative
		n (%)	24 (77.4)	7 (22.6)	19 (61.3)
COVID-19 Status	Control Group (Not Infected)	Female	Male	Academic	Administrative
		n (%)	31 (67.4)	15 (32.6)	32 (69.6)

Result 1: Demographic Information

A significant difference was found between age and severity of COVID-19 disease in the Kruskal Wallis Test that was performed among university personnel who had COVID-19 infection ($p=0.007$). Pairwise Comparison was applied to see which severity groups make this significant difference occur. As a result of the analysis, it was determined that there was a significant difference between mild and moderate severity ($p=0.009$). The average age of the university staff who felt the disease at moderate severity was found to be lower than the average age of the university staff who had the disease with mild severity. Additional data are presented in Figure 1.

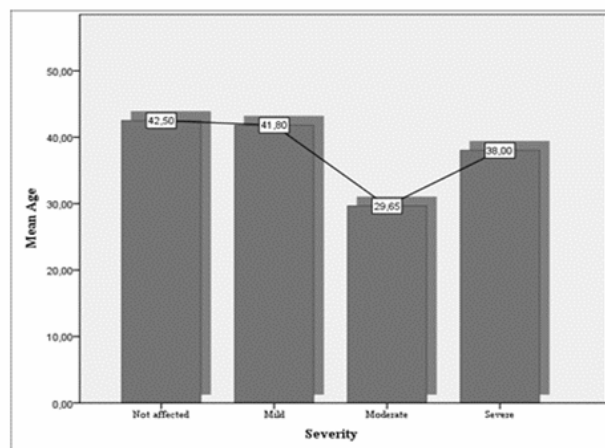


Figure 1. Relationship between age and COVID-19 symptom severity in COVID-19 positive university staff.

Result 2: Occupational Balance

No significant difference was found in the occupational balance between university personnel who had and did not have COVID-19 infection ($p=0.118$) (Table 2). However, it has been observed that occupational balance is affected by gender in university personnel with COVID-19 infection. OBQ11-T scores were found to be significantly lower in infected male individuals compared to infected female individuals ($p=0.043$). However, it should be noted that the number of male sample group is insufficient. In the control group, it was observed that occupational balance was not affected by gender ($p=0.49$).

Result 3: Quality of Life

A significant difference was found in the compassion satisfaction subscale scores of the ProQoL of individuals who have had COVID-19 compared to those who have not had the disease ($p=0.038$). However, there are no significant differences in burnout ($p=0.231$) and compassion fatigue ($p=0.658$) subscales (Table 2).

Further analysis was held within the study group. The burnout subscale scores of the ProQoL scale were found to be significantly lower for academic staff who had experienced COVID-19 than for administrative staff ($p=0.028$). On the other hand, such a significant finding was not found in the control group. The p values found when the subscales were analysed one by one are presented in Table 2 and Table 3.

Table 2. Statistical analysis of study and control groups on occupational balance and quality of life scores						
	COVID-19 Status	N	M±SD	t	df	Sig. (2-tailed)
OBQ11-T Total score	Infected	31	16.90±5.25	-1.581	75	.118
	Not Infected	46	18.95±5.80			
ProQoL Compassion satisfaction	Infected	31	33.48±6.30	-2.110	75	.038*
	Not Infected	46	36.84±7.21			
ProQoL Burnout	Infected	31	17.80±5.39	1.208	75	.231
	Not Infected	46	16.28±5.45			
ProQoL Compassion fatigue	Infected	31	13.64±6.85	-.445	75	.658
	Not Infected	46	14.41±7.78			

OBQ11-T: Turkish Occupational Balance Questionnaire; ProQoL: Professional Quality of Life Scale, M: Mean; SD: Standard deviation; Sig.: Significance. * $p<0.05$

Table 3. Analysis of quality-of-life scores among infected academic and administrative staff with comparative data of the control group							
ProQoL Subscales	Occupation	N	M±SD	t	df	Sig. (2-tailed)	
Study Group - Infected	Compassion satisfaction	Academic	19	33.52±6.42	.046	29	.963
		Administrative	12	33.41±6.38			
	Burnout	Academic	19	19.47±4.53	2.318	29	.028*
		Administrative	12	15.16±5.76			
	Compassion fatigue	Academic	19	15.21±7.30	1.644	29	.111
		Administrative	12	11.16±5.47			
Control Group - Not Infected	Compassion satisfaction	Academic	32	36.09±7.65	-1.074	44	.289
		Administrative	14	38.57±5.97			
	Burnout	Academic	32	17.18±5.71	1.740	44	.089
		Administrative	14	14.21±4.29			
	Compassion fatigue	Academic	32	14.65±8.97	.317	44	.753
		Administrative	14	13.85±4.16			

ProQoL: Professional Quality of Life Scale; M: Mean; SD: Standard deviation; Sig.: Significance. * $p<0.05$

DISCUSSION

The results showed that the effects of COVID-19 infection could be affected by gender, age, and job description, and determined that it could lead to changes in quality of life. According to our findings, there is no significant change found in the occupational balance between university personnel with and without COVID-19 infection. However, there are studies in the literature showing that being infected reduces the occupational balance. Gonzales-Barnel et al. reported that people who were not infected with COVID-19 had better occupational balance (29–31). In addition, it has been shown that occupational balance regresses, especially in studies conducted with healthcare professionals on COVID-19 positivity (30). We did not observe these differences. In most of the previous studies, it is thought that the reason why we could not find a significant difference between the two groups in our study is a general occupational balance disorder that can be seen in employees generally since the pandemic conditions seriously affect all service branches (5,23,30–33).

Our results reveal that gender influences occupational balance among people with COVID-19. The score of the occupational balance of university personnel with the male gender shows a significant decrease compared to females in our results. Although our male sample size is restricted (men with COVID-19, $n=7$) and we would like to explain these results with precautions, it is an interesting finding because with the pandemic conditions women faced difficulties in nearly every area of life. The increased burden of child-care, household, and work has created a disruption of occupational balance and psychological challenges among the women (34,35). On the other hand, Ayar et al. studied in 343 healthcare professional. It was revealed that the work-life balance of male healthcare professionals is weaker than that of female employees (36). Plus, there are also findings showing that the COVID-19 pandemic negatively affects men's mental health (37). In addition, as discussed in the study of Ayar et al., studies are showing that women's higher job satisfaction leads to higher work-life balance (36). When all this information is reviewed, it can be tentatively said that our results are consistent with previous studies, as the physiological and psychological effects of COVID-19 infection are more serious as mentioned before (32).

When examining whether the university staff's exposure to COVID-19 has an impact on their quality of life,

it was determined that the compassion satisfaction scores of university staff who had COVID-19 were lower than those who did not. A decrease in the quality of life of personnel working in especially severe conditions during the COVID-19 pandemic has been shown in various studies. Most of the studies carried out focus on healthcare workers who are fighting the COVID-19 pandemic (38–40). Studies conducted with health professionals show that the severity of burnout and compassion fatigue increases, while declining professional satisfaction may be a precursor to the further increase in burnout and compassion fatigue scores (39). In addition, several studies have argued that the compassion satisfaction of healthcare professionals is moderate to high and that these high scores are due to positive emotions such as helping people and gaining national and international respect for their profession (38,40). However, in these studies, the effects of the burdens brought by the pandemic were examined more, and the effects of COVID-19 infection on the quality of life of the service providers were not observed. In the study of Raman et al., it was determined that people who had COVID-19 infection experienced a deterioration in their quality of life compared to people who did not. Unfortunately, a very limited number of current studies examine university personnel. In the study conducted by Jojoa et al., the effects of the transition to online education on both 1084 university students and 554 academic staff were investigated, and an increase in anxiety, depression, and stress levels of both students and academic staff was found (41).

Another result we have reached in the analyses made on personnel who have had COVID-19 is that academic personnel have significantly higher burnout scores than administrative personnel. The emergence of the concepts of remote work and online education during the COVID-19 pandemic has changed the working routines. However, even if the workplaces of the administrative staff have changed, there is no change in their working routines, but the workload and work stress increase due to the transfer of routine training activities of academicians to online environments. Further studies are needed to focus on these subjects but it may have a link between the level of increased burnout scores in academic staff and the physical and psychological fatigue caused by the COVID-19 infection (42).

Finally, the symptom severity of university staff who had COVID-19 was examined, and when the mean age and

disease severity were compared, the mean age of those with mild symptoms was significantly greater than the mean age of those with moderate symptoms. Although this finding is in great contradiction with worldwide data, during the period when we collected the data for the research, the Republic of Turkey gave priority to the elderly citizens with chronic diseases and started to vaccinate young people after this priority group. We think that therefore the severity of the disease is milder in people with higher average age. Various studies have shown that vaccines developed against coronavirus are effective in reducing the severity of symptoms (43). Considering the relationship between occupational balance and quality of life on general health and well-being, it is extremely important to evaluate this population at certain intervals. As a result of our study; we suggest the development of strategies to increase the balance in occupational performance areas and the planning of occupational therapy strategies that will have positive effects on quality of life parameters.

Our current study has some limitations. Even though we conducted our study with the study and control group, our sample size was limited. In addition, the evaluations were carried out with only a limited number of evaluation tools. In addition, due to the uncertainty of the pandemic process and the changing working conditions and times of university staff, we did not have the chance to examine all the variables in detail by using more comprehensive evaluation methods such as semi-structured interview methods. Future studies with larger sample groups and detailed designs that will evaluate all roles of individuals in areas such as home, social life, and hobbies will provide better information for occupational therapy interventions to be planned in this regard.

CONCLUSION

As a result of the study the compassion satisfaction subscale of professional quality of life of university staff who had COVID-19 were found to be significantly lower than those of the control group. The burnout level of the COVID-19-positive academic staff was significantly higher than the administrative staff. Occupational balance were found to be significantly lower in males with COVID-19 compared to females with COVID-19. Occupational balance and professional quality of life were affected in university staff who had COVID-19.

Ethical Approval Declaration

This study, carried out by the Declaration of Helsinki, was approved by the Atlas University Non-Interventional Scientific Research Ethics Committee with protocol number 2021/05, on 15.02.2021.

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