Determination of the Factors Relating to Anxiety Levels of Primary Family Healthcare Center and Contact Tracing Workers for COVID-19

Süleyman ÖZSARI[1], Saadet CAN ÇİÇEK[2], and Derya KOCADAĞ[2]

[1]Affiliation not available
[2]Bolu Abant Izzet Baysal Universitesi

October 19, 2020

Abstract

Purpose:It is known that because of the pandemic, the psychosocial conditions of health workers have been affected and this carry the risk of increasing COVID-19-related mortality and morbidity by obstructing effective contact tracing. Purpose this study to determine anxiety disorders which may occur in primary contact tracers and family health center workers, and to determine their perceptions of institutional support and support from their coworkers. Results:It was found that 56.1% of participants had anxiety, 44.2% insomnia, 43.6% a low perception of organizational support, and 37.5% a lack of support from coworkers. Females and those with chronic illnesses had high levels of anxiety and insomnia and low perceptions of support from coworkers. Insomnia severity in contact tracers was high, and their support from coworkers was low. There was a positive correlation between anxiety and insomnia, and a negative correlation between organizational support and support from coworkers. It was shown in our study that sleep problems and a reduction in team and institution support increased anxiety, and reduced the team cohesion of field workers and trust in the institution. Because contact tracing is preformed independent of time, an increase in the frequency of contacts may cause anxiety and insomnia. High anxiety in females may be a result of a perception of low support from coworkers. Conclusion:Plans should be made to increase the effectiveness of training and support given to primary healthcare workers, and to operate speaking and reward mechanisms to increase motivation. For this the organizational strength of primary health care providers should be increased.

1. Introduction

The New Coronavirus Illness (COVID-19) appeared in the Chinese city of Wuhan on 31 December 2019, and spread rapidly to other countries, threatening all of humanity with a pandemic [1]. In Turkey, the first case was confirmed on 11 March 2020[2]; and the WHO declared COVID-19 to be a public health emergency of international importance. Because the virus has the ability to pass from person to person and because of the high death rates, there was a need for emergency prevention and treatment strategies[3,4]; and taking these characteristics of the virus into account, it was necessary to take measures to restrict movement and to reduce the rates of infection [5]. Also, no vaccination has yet been developed against the coronavirus causing the pandemic [6], and so, in the absence of pharmaceutical measures, ways to control the spread of the virus are more source control and prevention of infection [7]. In Turkey, the first step in combating infectious diseases when cases are reported is contact tracing, with the aim of establishing the agent, source, and path of infection of the disease [8]. Contact tracing work is of critical importance in preventing the spread of the disease and being able to effectively initiate and carry out health monitoring by establishing the agent and source at an early stage[7]. Bu çalışmalar kapsamında Since 24 July, 5.35% of the total population have been tested as part of this work, and the proportion of cases in the country has been determined as 5.02%. In addition, the fatality rate in Turkey of 2.49% [9] is lower than the world average of 4.05% and that of countries

with high death rates such as the USA (3.56%), Italy (14.3%), France (17.8%) and Iran (5.36%) [10]. It is thought that faster and earlier identification of possible cases by effective contact tracing over the whole country will be effective.

COVID-19 passing from one person to another is a cause of psychological stress not only for the general public but in particular for health workers [3,11,12]. In combating this critical situation, health care workers, who are on the front line in dealing directly with the diagnosis, treatment and care of COVID-19 patients, are at risk of psychological stress and other health problems. The growing number of diagnosed and suspected cases, the very heavy work load, the shortage of personal protective equipment, the widespread coverage by the media, the shortage of specific drugs and inadequate emotional support may all cause an increase in the mental burden of health care workers[13]. Also, health personnel worry about becoming infected when procedures are not properly followed in the workplace, or about family members becoming infected and an outbreak occurring, and this causes stress. Stress in turn is known to be a primary cause of sleep problems. Worry about catching the virus, uncertainty about the pandemic, the safety of co-workers, loneliness, and high personal expectations can cause anger, anxiety, insomnia and stress[11].). In such situations, fear and anxiety appear in the early stages, then after depression, psychosocial symptoms and trauma, symptoms of stress are seen, and the effects last for a long time [14].

The support of coworkers is a concept to explain the support which comes from those a person works with under the same job description[15] and which can affect a person's perception of their work environment. Coworkers have the potential to enrich a person's work experience and their perception of the organization, and are a source of support, lightening the workload [16]. Organizational support theory can be defined as organizational values, taking account of workers' contributions and happiness. In places where workers see equal organizational treatment, support from their superiors and rewards for working well, workers will place a greater value on their institutions in return for a high level of support according to this theory, and make greater efforts to achieve the aims of the institution, showing loyalty and effort in return for material and social rewards. Belief in having institutional support not only reduces the stress of the workplace, but at the same time helps to combat work-related fatigue which can lead to depression [17-19] and has positive effects on mental health by securing positive work attitudes and results[20].

It has been found that health workers' psychosocial and mental states are affected by the pandemic [13,14,21-23] and that rates of post-traumatic stress disorder, depression and anxiety are higher in primary healthcare workers who are in the closest contact with cases both in the acute and in the recovery phases [24]. Psychological problems such as stress or insomnia which may occur because of work load in health workers performing contact tracing in the field carry the risk of increasing COVID-19 related morbidity and mortality rates when reduced organization and coworker support prevent effective contact tracing. In Turkey as far as we know, no study has yet been conducted taking as its focus primary healthcare workers and contact tracers, and including in a single model anxiety and related factors in health workers during the COVID-19 outbreak. For this reason, this study was planned with the aim of providing standardization for studies on determining anxiety levels in primary contact tracers and family health center workers during COVID-19, bringing under control the insomnia and stress which may result, and strengthening institutional ties by providing training with organizational and coworker support.

2. Materials and Methods

2.1 Aim and Type of Study

This cross-sectional type of study was conducted with the aim of determining anxiety disorder in primary COVID-19 contact tracers and family health center workers and the problem of insomnia which may be related to this, and the perceptions of coworker and organizational support.

2.2 Population and Participants

The population of the study consisted of all (n=211) family health center (FHC) workers at all healthcare institutions of Bolu Province Health Directorate in the central and all outlying districts, and all (n=104)

COVID-19 contact tracers on active duty in other primary healthcare institutions. All FHC and contact tracer workers were reached, and so there was no sampling process. Three FHC workers who refused to take part in the research were excluded from the study.

2.3 Data Collection Instruments

Collection of research data was performed using a sociodemographic description form, the Generalized Anxiety Disorder-7 Scale (GAD-7)[25,26], the Insomnia Severity Index (ISI)[27,28], the Organizational Support Index (OSI) and the Coworkers' Support Index (CSI) [29].

Information was given online about the study, and approval to take part in the study was obtained electronically. All data collection instruments were applied online on a voluntary basis using Google Forms. The data collection process was conducted in accordance with the rules of the most recent version of the Helsinki Declaration. The study was conducted with the permission of the Ethics Committee of Bolu Abant İzzet Baysal University, No. 199, dated 22 June 2020. Participants were informed that information would be coded and that confidentiality would be maintained.

Sociodemographic Description Form: This form was created by the researchers, and recorded the participants' age, gender, marital status, title, years of work, field of work, whether they had children, whether they smoked or drank alcohol, whether they had a chronic illness, their regular use of a medication, their status regarding COVID-19 and protective equipment training, their feeling of being protected during an intervention, and their anxiety compared with before COVID-19.

The Generalized Anxiety Disorder-7 Scale (GAD-7): This is a four-way Likert-type scale of seven items, scored from 0 to 3. A score of 0-4 indicates no anxiety, 5-9 moderate anxiety, 10-14 high anxiety, and 15-21 severe anxiety. Turkish validity and reliability testing were performed by [26] and the Cronbach alpha coefficient was 0.852.

Insomnia Severity Index (ISI): This is a five-way Likert type scale, with seven items scored from 0 to 4. A score of 0-7 is categorized as insomnia at a clinically insignificant level, 8-14 as lower threshold, 15-21 as clinically moderate insomnia, and 22-28 as clinically severe insomnia. Turkish validity and reliability were tested by [28] and the Cronbach alpha coefficient was 0.790.

The Organizational Support (OSI) and Coworker Support (CSI) Indices: These indices are five-way Likert-type scales with items scored from 0 to 5. The OSI has 12 items, and the CSI has nine. Turkish validity and reliability testing were performed by [29]the Cronbach alpha coefficient was 0.930.

The reliability of the scales was 0.935 for Gad-7, 0.692 for ISI, 0.954 for OSI, and 0.964 for CSI, so that all scales were reliable.

2.4 Statistical Analysis

The package SPSS 20 was used to analyze data. Conformity to normal distribution was examined with skewness and kurtosis coefficients in addition to the Kolmogorov-Smirnov test. The medians of groups which did not show normal distribution were compared, and in the comparison of two independent groups, the Mann-Whitney test was used, and in the comparison of three or more independent groups, the Kruskal-Wallis test was used. When the difference between groups was significant, Bonferroni correction was used to determine the difference.

Correlation analysis was used for the relation between continuous variables. Effect size was examined with Cohen's d, and effect dimension with Cohen's r. Cohen's d:0.20 was accepted as a small effect, d:0.50 as a moderate effect, d:0.80 as a large effect, r:0.10 as a low effect, r:0.30 as a moderate effect, and r[?]0.50 as a high effect[30]. Independent variables in the linear regression model (enter method) in which GAD-7 was accepted as a dependent variable were ISI, OSI and CSI scores. In addition, the categoric variables of gender, having children, marital status, and tobacco and alcohol use were analyzed in the model as dummy variables, and as a result only the variables of gender (reference group: female) and having children (reference group: I have children) were found to be significant for the linear regression model ($p<0.05$ and $F_{4,307}$: 106.347). In order

to identify the problem of multicollinearity, the limits of VIF (Variance Inflation Factor)<10, tolerance<2 and Durbin-Watson<2.5 were checked, and the conformity of residuals to normal distribution was examined, taking skewness-kurtosis coefficients of ±1 as a base [31]. A statistical significance level of p<0.05 was taken as significant.

3. Findings

Table 1. Participants' Demographic Characteristics

It was found that 46.2% of the participants were physicians, and that 53.8% were health personnel other than physicians; 66.7% were employed at a family health center, and 33.3% in contact tracing teams. Also, 65.7% of the participants were female and 34.3% were male; 75% were married and 69.2% had children; 25% stated that they used medication regularly, 26.6% that they smoked, and 8% that they consumed alcohol. It was also found that 89.4% had protective equipment, 93.6% had received training on COVID and 67.6% had had no difficulties in obtaining protective equipment; the anxiety levels of 61.5% of participants had risen compared with before COVID, but 81.1% thought that they were partially or fully protected. The mean age of the participants was 36.92±8.09 years, and they had been working for 13.88±8.48 years (Table 1).

Table 2. Descriptive statistics of the indices

Examining participants' anxiety values, it was found that 43.9% did not have anxiety, 29.5% had moderate anxiety, 13.5% had high anxiety, and 13.1% had severe anxiety. The insomnia categories showed that 55.8% had insomnia at a clinically insignificant level, 33.7% had lower threshold insomnia, 9.3% had moderate insomnia, and 1.3% had severe insomnia. It was found that the perception of organizational support (56.4%) and of coworker support (62.5%) among the participants was above average (Table 2).

Table 3. Analysis of index differences according to demographic characteristics

Examining Table 3, it is seen that for the variables of years of work, marital status, having children, drinking alcohol, smoking, the presence of someone in a risk group in the household, and difficulty obtaining protective equipment, GAD-7, ISI, OSI and CSI were not statistically significant (p>0.05). Anxiety and insomnia were greater in females than in males, but their perception of team support was lower (p<0.05; Cohen's d: 0.65, 0.49 and 0.36 respectively). In perception of organizational support, there was no significant difference (p>0.05). The anxiety of physicians was lower than that of other health workers, but their perception of organizational and team support was higher (p<0.05; Cohen's d:0.25; 0.16 and 0.27 respectively). There was no statistically significant difference between the anxiety and perception of organizational support of FHC and contact tracing workers, but the insomnia levels of contract tracers were higher, and their perception of team support was lower (p<0.05; Cohen's d:0.19 and 0.25 respectively). Perception of organizational support showed no significant difference according to the presence of a chronic illness (p>0.05). Anxiety and insomnia were higher in those who regularly used medication, but perception of organizational support was lower (p<0.05; Cohen's d:0:63, 0.45 and 0.38 respectively). Perception of coworker support did not show a difference according to use of medication (p>0.05). At the same time, anxiety and insomnia were higher in those with a chronic illness and those using medication (p<0.05; Cohen's d:0.077 and 0.053 respectively). Perception of team support was higher in those who had received training in protective equipment than in those who had not (p<0.05; Cohen's d: 0.33), but their anxiety, insomnia and perception of organizational support were not significant (p>0.05). Anxiety and insomnia were highest in those who did not think they were protected, but their perception of organizational and team support was the lowest (p<0.05; Cohen's d:0.082, 0.046, 0.091 and 0.042 respectively). Anxiety and insomnia were highest in those who thought their anxiety levels had risen compared with before COVID (p<0.05; Cohen's d:0.200, 0.113 respectively). There was no statistically significant difference in the perception of organizational and coworker support (p>0.05).

Table 4. Correlation and regression analysis between indices

An examination of Table 4 shows a positive correlation between anxiety and insomnia (p<0.05, Cohen's r:0.12), a moderate negative correlation between anxiety and organizational support (p<0.05, Cohen's r:0.89), and a moderate negative correlation between anxiety and coworker support (p<0.05, Cohen's r:0.89).

Anxiety was analyzed to be a dependent variable in the linear regression model (enter model) and the variables ISI, OSI and CSI as continuous measurement variables, gender, having children, marital status, smoking and alcohol consumption as dummy variables, and as a result the variables ISI, OSI, gender (reference group: female), and having children (reference group: I have children) were found to be significant for the linear regression model ($p<0.05$ and $F_{4.307}$:106.347). Distribution of the dummy variables conformed to normal distribution, with VIF<10, tolerance<2 and Durbin-Watson<2.5. 58.1% of variability which may occur in anxiety can be explained by insomnia, organizational support, gender, and having children (R^2=0.581). One unit of variation in insomnia will raise anxiety by 0.761 units, being female 1.521 units, and having children 1.196 units, while a one-unit increase in perceived organizational support will lower anxiety by 0.098 units. The variable of coworker support was not significant for the linear regression equation ($p>0.05$) (Table 4).

4. Discussion and Conclusion

Even though health workers are focused on the struggle to save lives and see risks as a normal part of their work during the COVID-19 pandemic[32], they may overlook such critical topics as becoming infected or being the source of infection, separation from their families, burnout in the face of events which they have experienced such as the loss of a patient or a colleague, stress, or their state of psychological wellbeing. Our study showed that sleep disruption and a reduction in team and institution support increased anxiety, and also reduced team cohesion and trust in the organization. Anxiety which emerged in the uncertainty of the first months of the pandemic[33] was greater in females [13]; but as the pandemic advanced, it was seen that although this difference remained significant, it was reduced. It is thought that this result may have been affected by the spread of the disease and an increase in the length of time of informing the public. As well as this, perceived coworker support for women contacted in the study was low, and this may be a risk factor for anxiety. An increase in the frequency of contact with patients wears out health workers both physically and psychologically, causing high stress levels and insomnia. In addition, while approximately 35% of health workers have experienced insomnia during the COVID-19 outbreak [11] this rose to 44% in our study.

Working in high risk areas such as family health centers or in field teams establishing contact with infected persons is a cause of widespread stress disorder [14,34,35]. However, one reason for there being no significant difference in our study between anxiety levels in family health centers and contact tracers may be that because contact tracers did not have trouble obtaining protective equipment (68%) and their training and knowledge levels were high, they approached a suspected or known contact with greater caution. Although a difference was found in one study in anxiety and insomnia between field workers and primary health workers in an outpatients' department (14) in our study, no difference was found in anxiety, although field workers had more insomnia (contact tracers:8.66±4.41 and FHC:7.79±4.67). One factor may be that the hours worked by contact tracers may have disrupted their sleep patterns.

The risk to health workers employed in the pandemic of infecting their families and others close to them is a source of stress because of the fear of infection of those who carry responsibility[36]. At the same time, it may be said that the social role of women is greater, so that in a pandemic or time of crisis, factors such as lack of isolation because of social status and their roles in the home deepen their anxiety, reducing their perception of team support. A rise in coworker support for women may secure a reduction in problems of anxiety and insomnia.

Workers who receive less organizational support have a greater tendency for conflict with their colleagues and generally believe their organizations less [18]. A feeling is created among health workers who think that their contributions are appreciated and who feel that they are of value to the organization that their psychosocial needs are met as their feelings of trust in their organizations which were reduced increase [37,38]. The low organizational and coworker support for health workers can be increased by giving theoretical and practical training according to position more frequently and at specific times. Along with the training, material and spiritual rewards can be planned to encourage motivation and focus. In this way it may be predicted that people will more willingly make an effort for the organization and their connections with the organization they work in will be strengthened by having their emotional needs such as respect, acceptance and support met. Also, provision of organizational support to health workers equally irrespective of position may be a

factor in increasing organizational and coworker support.

Despite fear and anxiety becoming evident at an early stage of the epidemic, depression, psychophysiological and trauma are followed in an advancing process by symptoms of stress [14,39]. Factors such as being isolated, working in high-risk positions and having contact with infected people are accepted as among the main reasons for trauma [14] and this can weaken people's organizational and friendship bonds by disrupting their social relationships. Continuity of social support can reduce workers' need for psychosocial support as a result of the periodic furthering of individual psychological support.

5. Recommendations

Studies have shown that levels of chronic psychiatric morbidity such as depression and anxiety after trauma can appear in the long term after events such as an outbreak of disease or a pandemic[39]. At such times, it has been shown that long-term effective support and in-service training are productive, and the possession of greater professional knowledge of infectious diseases by doctors than by other health personnel has a significant effect in reducing anxiety [14,35]. Similar conclusions were reached in our study, and as well as providing data, training and support on a long-term, needs-based and regular basis in order to reduce anxiety and increase team support because the anxiety of heath personnel other than physicians was shown to be high, individual motivational interviews can be conducted with all health workers. Also, plans can be made to increase training on epidemic management and control in the field in the degree education of auxiliary health personnel. We are of the opinion that for primary healthcare workers who may unexpectedly find themselves combating an outbreak of disease to be prepared against outbreaks of infectious disease and to be mentally and psychologically resistant, an increase in the share of government budgets for investment in protective health services will be an important factor in reducing to a minimum the risks which may arise.

Activities to prevent anxiety should be increased by better coordinating in-service training of contact tracing teams with field work; the problems experienced by primary healthcare workers should be communicated through the organizational hierarchy without delay, and solutions should be rapidly found. In addition, we feel that the lack of coworker support for health workers working in direct contact with cases at the primary level should be taken into account and team numbers should be increased to be able to manage the current situation, and that it would be beneficial to take into account the preferences and recommendations of health workers for colleagues when forming teams. Also, teams should be given enough time to rest during their working time.

It is uncertain how long the pandemic will last, so that long-term studies may be foreseen on whether mental health problems in health workers such as anxiety and insomnia develop into chronic psychiatric disorders.

6. Limitations

The research has a number of limitations. Firstly, the comprehensibility of what the questions included when comparing with face to face interviews could not be assessed. Secondly, this was a cross-sectional study, and long-term effects of in-service training and support could not be observed. Thirdly, because the disaster appeared suddenly, the psychological conditions of individuals before the outbreak could not be measured.

Compliance with Ethical Standards: This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of University of Bolu Abant İzzet Baysal (Date: 22 June 2020/No:199).

Funding: No funding was received for conducting this study.

Conflict of Interest : The authors have no conflicts of interest to declare that are relevant to the content of this article

References

1. Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *New England Journal of Medicine.* 2020.

2. HSGM. *COVID-19 Rehberi Genel Bilgiler Epidemiyoloji ve Tanı.*T.C. Sağlık Bakanlığı Halk Sağlığı Genel Müdürlüğü

3. Cheng L, Zheng W, Li M, et al. Citrus fruits are rich in flavonoids for immunoregulation and potential targeting ACE2. 2020.

4. WHO. (World Health Organization) Coronavirus disease 2019.*https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen 07.06.2020* .

5. García-Iglesias JJ, Martín-Pereira J, Fagundo-Rivera J, Gómez-Salgado J. Digital surveillance tools for contact tracking of infected persons by SARS-CoV-2. *Revista espanola de salud publica.*2020;94:e202006067.

6. TÜBA. *Türkiye Bilimler Akademisi, COVID-19 Pandemi Değerlendirme Raporu.*

7. Salathé M, Althaus CL, Neher R, et al. COVID-19 epidemic in Switzerland: on the importance of testing, contact tracing and isolation. *Swiss medical weekly.* 2020;150(11-12):w20225-.

8. HSGM. *TC Sağlık Bakanlığı Bulaşıcı Hastalıklar İle Mücadele Rehberi.*

9. https://covid19bilgi.saglik.gov.tr/tr/. *24.07.2020* .

10. https://covid19.who.int/. *24.07.2020* .

11. Zhang C, Yang L, Liu S, et al. Survey of insomnia and related social psychological factors among medical staff involved in the 2019 novel coronavirus disease outbreak. *Frontiers in Psychiatry.*2020;11:306.

12. TürkToraksDerneği. *Mesleksel Akciğer Hastalıkları Çalışma Grubu Sağlık Çalışanlarında COVID-19 Salgını Sırasında Mesleki Riskler Hakkında Bilgilendirme ve Öneriler.*

13. Lai J, Ma S, Wang Y, 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.

14. Kang L, Ma S, Chen M, et al. Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study.*Brain, behavior, and immunity.* 2020.

15. Yoon J, Lim J-C. Organizational support in the workplace: The case of Korean hospital employees. *Human relations.*1999;52(7):923-945.

16. Norling LR, Chopik WJ. The association between coworker support and work-family interference: A test of work environment and burnout as mediators. *Frontiers in Psychology.* 2020;11:819.

17. Allen MW, Armstrong DJ, Reid MF, Riemenschneider CK. Factors impacting the perceived organizational support of IT employees.*Information & Management.* 2008;45(8):556-563.

18. Al-Omar HA, Arafah AM, Barakat JM, Almutairi RD, Khurshid F, Alsultan MS. The impact of perceived organizational support and resilience on pharmacists' engagement in their stressful and competitive workplaces in Saudi Arabia. *Saudi Pharmaceutical Journal.*2019;27(7):1044-1052.

19. Robaee N, Atashzadeh-Shoorideh F, Ashktorab T, Baghestani A, Barkhordari-Sharifabad M. Perceived organizational support and moral distress among nurses. *BMC nursing.* 2018;17(1):1-7.

20. Qiu T, Yang Y, Liu C, et al. The association between resilience, perceived organizational support and fatigue among Chinese doctors: A cross-sectional study. *Journal of Affective Disorders.*2020;265:85-90.

21. Rajkumar RP. COVID-19 and mental health: A review of the existing literature. *Asian journal of psychiatry.* 2020:102066.

22. Chen Q, Liang M, Li Y, Guo J, Fei D. & Wang, J.(2020). *Mental health care for medical staff in China during the COVID-19 outbreak The Lancet Psychiatry.* 7(4):e15-e16.

23. Dong L, Bouey J. Early Release-Public Mental Health Crisis during COVID-19 Pandemic, China.

24. Duan L, Zhu G. Psychological interventions for people affected by the COVID-19 epidemic. *The Lancet Psychiatry.* 2020;7(4):300-302.

25. Löwe B, Decker O, Müller S, et al. Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. *Medical care.* 2008:266-274.

26. Konkan R, ŞENORMANCI Ö, Güçlü O, Aydin E, Sungur MZ. Yaygın Anksiyete Bozukluğu-7 (YAB-7) Testi Türkçe Uyarlaması, Geçerlik ve Güvenirliği. *Archives of Neuropsychiatry/Noropsikiatri Arsivi.*2013;50(1).

27. Bastien CH, Vallières A, Morin CM. Validation of the Insomnia Severity Index as an outcome measure for insomnia research. *Sleep medicine.* 2001;2(4):297-307.

28. Boysan M, Güleç M, Beşiroğlu L, Kalafat T. Uykusuzluk Şiddeti İndeksi'nin Türk örneklemindeki psikometrik özellikleri. *Anadolu Psikiyatri Dergisi.* 2010;11(3):248-252.

29. Giray MD, Sahin DN. Algilanan Örgütsel, Yönetici ve Çalisma Arkadaslari Destegi Ölçekleri: Geçerlik ve Güvenirlik Çalismasi.*Turk Psikoloji Yazilari.* 2012;15(30):1.

30. Cohen J. *Statistical Power Analysis for the Behavioral Sciences.* 2 Ed. Hillsdale. NJ: Erlbaum. ; 1988.

31. Büyüköztürk Ş. *Veri Analizi El Kitabı.* Pegem Akademi; 2015.

32. Zhang SX, Sun S, Jahanshahi AA, et al. Developing and testing a measure of COVID-19 Organizational Support of Healthcare Workers–Results from Peru, Ecuador, and Bolivia. *Psychiatry Research.* 2020:113174.

33. Zhang W-r, Wang K, Yin L, et al. Mental health and psychosocial problems of medical health workers during the COVID-19 epidemic in China. *Psychotherapy and psychosomatics.* 2020;89(4):242-250.

34. Wu P, Fang Y, Guan Z, et al. The psychological impact of the SARS epidemic on hospital employees in China: exposure, risk perception, and altruistic acceptance of risk. *The Canadian Journal of Psychiatry.* 2009;54(5):302-311.

35. Maunder R, Hunter J, Vincent L, et al. The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *Cmaj.* 2003;168(10):1245-1251.

36. Sun D, Yang D, Li Y, et al. Psychological Impact of 2019 Novel Coronavirus (2019-nCoV) Outbreak on Health Workers in China.*Epidemiology & Infection.* 2020:1-17.

37. Tamer İ, Bük TB. Algılanan Örgütsel Destek ve Örgütsel Bağlılık Üzerine Kavramsal bir İnceleme. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi.* 7(2):139-147.

38. Li M, Shu Q, Huang H, Bo W, Wang L, Wu H. Associations of occupational stress, workplace violence, and organizational support on chronic fatigue syndrome among nurses. *Journal of Advanced Nursing.* 2020;76(5):1151-1161.

39. Talevi D, Socci V, Carai M, et al. Mental health outcomes of the CoViD-19 pandemic. *Rivista di Psichiatria.* 2020;55(3):137-144.

Hosted file

`Table 1.pdf` available at https://authorea.com/users/368267/articles/487465-determination-of-the-factors-relating-to-anxiety-levels-of-primary-family-healthcare-center-and-contact-tracing-workers-for-covid-19

Hosted file

`Table 2.pdf` available at https://authorea.com/users/368267/articles/487465-determination-of-the-factors-relating-to-anxiety-levels-of-primary-family-healthcare-center-and-contact-tracing-workers-for-covid-19

Hosted file

Table 3.pdf available at https://authorea.com/users/368267/articles/487465-determination-of-the-factors-relating-to-anxiety-levels-of-primary-family-healthcare-center-and-contact-tracing-workers-for-covid-19

Hosted file

Table 4.pdf available at https://authorea.com/users/368267/articles/487465-determination-of-the-factors-relating-to-anxiety-levels-of-primary-family-healthcare-center-and-contact-tracing-workers-for-covid-19