*ASEAN Journal of Psychiatry, Vol. 22(2), March 2021: 1-13*

**RESEARCH ARTICLE**

# RESEARCH OF THE FACTORS AFFECTING DEPRESSION, ANXİETY AND STRESS LEVELS OF INDIVIDUALS IN THE COVID-19 PANDEMIC PROCESS

***Esat Şanlı*, Mehmet Celal kefeli*****

***Department of Educational Sciences, Ondokuz Mayis University (OMU), Samsun, Turkey**

****Mengücek Gazı Training and Research Hospital, Erzincan University, Erzincan, Turkey**

## Abstract

**As in all cases, individuals' psychological reactions differ from each other in critical processes such as in pandemic. It is important to determine which factors are more threatening to individuals' mental health. In this context, in the study it is aimed to measure the depression, anxiety and stress responses of individuals during the COVID-19 pandemic process in Turkish society and to research whether there is a significant difference according to some variables such as gender, age, marital status, time spent at home during the pandemic process, social media usage level, whether a relative is positive or not, and whether the workload increases or decreases during the pandemic process. *Methods:* In this research, a descriptive method has been used in the relational screening model. The sample consists of a total of 881 participants, 484 of which are women and 397 men. The personal information form has been used as a measurement tool, and the DASS-21 scale has been used to determine the levels of depression, anxiety and stress. Since the data do not show normal distribution, non-parametric analysis methods have been used. *Results:* In the study, it was understood that gender, marital status, age, duration of social media use, a COVID-19 positive relative, staying at home and increased workload had significant effects on psychological reactions. Suggestions are given in the light of the research findings. *ASEAN Journal of Psychiatry, Vol. 22 (2): March 2021: 1-13.***

**Keywords: Depression in Covid-19, Anxiety in Covid-19, Stress in Covid-19**

## Introduction

In the last 20 years; Several viral diseases were seen, including Severe Acute Respiratory Syndrome (SARS) in 2003, H1N1 subtype flu virus in 2009, Middle East Respiratory Syndrome (MERS) in 2012, and Ebola virus in 2014. Finally, pneumonia due to the SARS-CoV-2 factor, which started to be seen in Wuhan, China in December 2019, was defined as coronavirus disease 2019 (COVID-19). It has been observed that the clinical manifestations of Covid-19 disease range from mild conditions such as asymptomatic disease or upper respiratory tract infection to severe viral pneumonia accompanied by respiratory failure and can cause death [1]. The main feature that distinguishes SARS-COV-2 from previous coronavirus family members such as SARS and MERS is that this virus spreads very easily and quickly (World Health Organization 2020). Perhaps because of this feature, it spread all over the world in a short time and caused it to be

declared as a pandemic (global epidemic) by the World Health Organization on March 11, 2020. (World Health Organization 2020). There is no specific vaccine and treatment method yet proven for COVID-19 (World Health Organization 2020). Therefore, various measures have been implemented in many countries in order to prevent the spread and negative consequences of the virus. Due to both the anxiety of becoming sick and the limitations of the measures implemented due to the pandemic, psychological effects were observed in many individuals. In this context, depression-anxiety-stress levels have been examined in different populations in many parts of the world and similarly significantly higher values were found [2,3].

It has been determined that during the COVID-19 pandemic process and other epidemic processes in the past, people were psychologically affected, and this impact varies with many parameters including demographic data. For example, in a study conducted with horse owners who were quarantined during the equine influenza epidemic detected in farm animals in 2007, it was shown that females at young age and low education level are associated with psychological problems [4]. On the other hand, in a study examining the effects of the SARS epidemic, it was found that demographic factors such as age, marital status, education level were not related to psychological reactions [5]. In a study conducted in China during the COVID-19 pandemic process, it was observed that gender, education level, and the level of access to protective measures created significant differences in psychological reactions [3]. In a study conducted in India, it was found that gender, employment status and alcohol consumption were associated with psychological reactions during the pandemic process. In another study conducted on healthcare professionals, it was observed that gender and marital status made significant differences on anxiety, and the use of protective equipment on depression and stress levels [6].

It is important to determine which factors negatively affect the mental health of individuals during critical processes such as pandemics. In this context, in the present study, it is aimed to measure the depression, anxiety and stress responses of individuals during the COVID-19 pandemic process in Turkish society and to investigate whether they differ significantly according to some variables (gender, age, marital status, time spent at home during the pandemic process, level of social media use, whether a relative is COVID-19 positive or not, the increase and decrease of workload during the pandemic process).

## Methods

In the research, a descriptive method was used in the relational screening model. Relational screening model; is a research model that aims to determine whether there is a change between two or more variables and if there is a change, determine its level.

### *Population and Sample*

The research population consists of individuals between 18-80 years of age residing in Turkey. According to TUIK 2019 data the number of people in this age bracket in Turkey was 56,108,215. This number constitutes the main body of the research. Thus, the number of suitable samples to be taken from the population for research is 600 people with a 95% confidence interval and ± 4 margin of error. In this context, a total of 881 participants, 484 women and 397 men, were included in the study. In line with this object, the simple random sampling method will be used in the research. The online forms prepared were spread to individuals between the ages of 18-80 through social media and no participation criteria were sought for individuals in this age range other than volunteering.

### *Data Collection Tools*

**Personal ınformation form:** In the study, some information that is thought to have an effect on the individuals' depression, anxiety, stress or characteristic of temperaments, especially during the Covid-19 pandemic process, was requested through the personal information form developed by the researchers.

**Depression Anxiety and Stress Scale (DASS 21):** This scale was developed by Lovibond and

Lovibond and its Turkish adaptation studies were carried out by Yıldırım, Boysan, and Kefeli. Validity and reliability studies showed that Cronbach alpha internal consistency reliability coefficient was α=0.89 for depression subscale, α=0.87 for anxiety subscale and α=0.81 for stress subscale. In addition, the scale was found to differ for the patient population and normal individuals in terms of depression, anxiety, and stress: following values were obtained; for individuals with major depression (average depression score=13.27; average anxiety score=09.03; average stress score=12.10), for individuals diagnosed with anxiety disorder (average depression score=11.23; average anxiety score=10.70; average stress score =12.37) and for normal individuals (average depression score=3.23; average anxiety score=2.41; average stress score=3.99) (F=2.306. p=0.00). Thus, the obtained psychometric properties show that DASS-21 is a valid and reliable measurement tool for determining depression, anxiety and stress levels.

*Collection of Data*

Data were collected *via* online forms in accordance with the measures taken due to the Covid-19 outbreak. In the statement made at the beginning of the data collection tools, it was stated that the only responsibility expected from the participant for whom the personal information is not requested, is to fill the forms completely and sincerely, and the evaluations to be made will not be individual. In this way, it was ensured that the participants had information about what they would and would not encounter in the study.

*Analysis of Data*

The obtained data were analyzed in computer environment with SPSS 22. Whether the data showed a normal distribution was examined, and the analyses were carried out in this direction. For each of the independent variables evaluated in the study, it was examined whether the data showed a normal distribution or not. It is suggested to use Kolmogorov-Smirnov value as a normal distribution criterion. It is concluded that the distribution is normal when Kolmogorov-Smirnov α>0.05. In this study, it was understood that the data did not show a normal distribution. Therefore, nonparametric statistical methods have been preferred.

**Results**

The first question of the study was to test whether gender has a significant effect on the differentiation of depression, anxiety and stress levels of individuals during the COVID-19 pandemic process. To test this effect, Mann Whitney-U test was performed on the data.

**Table 1. Mann whitney-U analysis on DASS scores by gender**

| **Dimension** | **Groups** | $N$ | $\bar{x}_{sira}$ | $\sum_{sira}$ | $U$ | $z$ | $p$ |
|---|---|---|---|---|---|---|---|
| Depression | Female | 484 | 468.7 | 226849 | 82669 | -3.583 | .000* |
| | Male | 397 | 407.23 | 161672 | | | |
| Anxiety | Female | 484 | 451.2 | 218382 | 91136 | -1.34 | 0.18 |
| | Male | 397 | 428.56 | 170139 | | | |
| Stress | Female | 484 | 466.93 | 225996 | 83522 | -3.354 | .001* |
| | Male | 397 | 409.38 | 162525 | | | |

When the values on Table 1 are examined, it is seen that the average rank of women in each of the depression, anxiety and stress sub-dimensions is higher than that of men. On the other hand, it is understood that the effect of gender on depression (U=82669. p=0.000) and stress (U=91136. p=0.001) is statistically significant, and the effect on anxiety (U=83522. p=0.180) is insignificant.

Another variable considered in the research is age. In order to determine whether age is an important factor affecting the depression, anxiety and stress levels of individuals during the COVID-19 pandemic process, the Kruskal Wallis test was conducted on the data.

**Table 2. Kruskal wallis analysis on DASS scores by age**

| **Dimension** | **Groups** | *N* | $\bar{x}_{sira}$ | $x^2$ | *sd* | *p* |
|---|---|---|---|---|---|---|
| Depression | 18-30 | 413 | 512.17 | 65.104 | 3 | .000** |
| | 31-40 | 245 | 395.16 | | | |
| | 41-50 | 138 | 375.52 | | | |
| | 50 and above | 85 | 333.64 | | | |
| Anxiety | 18-30 | 413 | 471.7 | 13.997 | 3 | .003* |
| | 31-40 | 245 | 427.54 | | | |
| | 41-50 | 138 | 388.11 | | | |
| | 50 and above | 85 | 416.49 | | | |
| Stress | 18-30 | 413 | 488.47 | | 3 | .000** |
| | 31-40 | 245 | 411.27 | 30.81 | | |
| | 41-50 | 138 | 406.11 | | | |
| | 50 and above | 85 | 352.66 | | | |

When the values in Table 2 are examined, it is seen that the highest rank averages for each of the depression, anxiety and stress sub-dimensions belong to individuals in the 18-30 age range. It is noteworthy that as age increases, except for the anxiety subscale, there is a regular decrease in the mean ranks of depression, anxiety and stress. In the anxiety sub-dimension, it is understood that the mean rank of individuals between the ages of 41-50 changed the said hierarchical score decrease. In this respect, the findings indicate that the highest levels of depression and stress are in the 18-30 age range during the COVID-19 pandemic process, and depression and stress significantly decrease as age increases.

In the study, it was also questioned whether the marital status of individuals significantly affected their psychological reactions during the COVID-19 pandemic process. Kruskal Wallis analysis was performed on the data to search for an answer to this question.

**Table 3. Kruskal wallis analysis on DASS scores by marital status**

| **Dimension** | **Groups** | *N* | $\bar{x}_{sira}$ | $x^2$ | *sd* | *p* |
|---|---|---|---|---|---|---|
| Depression | Married | 484 | 396.79 | 33.36 | 2 | 0.000** |
| | Single | 381 | 497.02 | | | |
| | Divorced | 16 | 444.38 | | | |
| Anxiety | Married | 484 | 418.09 | 9.08 | 2 | 0.011* |
| | Single | 381 | 469.33 | | | |
| | Divorced | 16 | 459.5 | | | |
| Stress | Married | 484 | 420.76 | 7.93 | 2 | 0.019* |
| | Single | 381 | 468.39 | | | |
| | Divorced | 16 | 400.97 | | | |

The values in Table 3 show that single individuals have the highest average rank in each of the dimensions of depression, anxiety, and stress. It is observed that divorced individuals rank second in anxiety and depression dimensions and married individuals rank second in stress dimension. The aforementioned differences between the mean rank are significant for each of the depression ($x^2$ =33.36. p<.001), anxiety ($x^2$ =9.08. p<.05), and stress ($x^2$ =7.93. p<.05) sub-dimensions.

In the study, the diagnosis status of a relative, thought to affect the psychological reactions of individuals during the COVID-19 pandemic process, was also evaluated. Mann Whitney-U test was performed on the data for this evaluation,

**Table 4. Mann whitney-U analysis on DASS scores according to relative's health status for COVID-19**

| **Dimension** | **Groups** | *N* | $\bar{x}_{sira}$ | $\sum_{sira}$ | *U* | *Z* | *p* |
|---|---|---|---|---|---|---|---|
| Depression | Yes | 797 | 433.84 | 345771 | 27768 | -2.584 | .010* |
| | No | 84 | 508.93 | 42750 | | | |
| Anxiety | Yes | 797 | 431.86 | 344195.5 | 26192.5 | -3.349 | .001* |
| | No | 84 | 527.68 | 44325.5 | | | |
| Stress | Yes | 797 | 435.39 | 347002.5 | 28999.5 | -2.025 | .043* |
| | No | 84 | 494.27 | 41518.5 | | | |

The values in Table 4 show that individuals with relatives diagnosed with COVID-19 have higher rank averages in each of the dimensions of depression (*U*=27768. *p*=0.010), anxiety (*U*=26192. *p*=0.001) and stress (*U*=28999. *p*=0.043), and these differences are statistically significant.

In the study, it was also tested whether the time individuals spend on social media during the pandemic process causes a significant change on their psychological reactions. Kruskal Wallis analysis was performed on the data for this purpose,

**Table 5: Kruskal wallis analysis on DASS scores according to spending time/by the time spent on Social Media**

| **Dimension** | **Groups** | *N* | $\bar{x}_{sira}$ | $x^2$ | *sd* | *p* |
|---|---|---|---|---|---|---|
| Depression | 0-2 Hours | 250 | 363.52 | 44.12 | 3 | 0.000** |
| | 3-6 Hours | 422 | 449.29 | | | |
| | 7-10 Hours | 155 | 504.28 | | | |
| | 10 + | 54 | 553.31 | | | |
| Anxiety | 0-2 Hours | 250 | 388.78 | 21.58 | 3 | 0.000** |
| | 3-6 Hours | 422 | 444.3 | | | |
| | 7-10 Hours | 155 | 493.56 | | | |
| | 10 + | 54 | 506.08 | | | |
| Stress | 0-2 Hours | 250 | 385.75 | 21.4 | 3 | 0.000** |
| | 3-6 Hours | 422 | 447.54 | | | |
| | 7-10 Hours | 155 | 490.04 | | | |
| | 10 + | 54 | 504.94 | | | |

When the values in Table 5 are examined, it is seen that, the average rank of individuals who spend more than 10 hours a day on social media is higher in each of the depression, anxiety and stress sub-dimensions. For each sub-dimension, it is noteworthy that as the duration of daily social media use decreases, depression, anxiety and stress scores also decrease significantly. Accordingly, as the duration of daily social media use increases during the pandemic process, it is understood that depression ($x^2$ =44.12. p<0.05), anxiety ($x^2$ =21.58. p<0.001) and stress ($x^2$ =21.40. p<0.001) levels increase significantly.

**Table 6: Kruskal wallis analysis on DASS scores by residential unit**

| Dimension | Groups | *N* | $\bar{x}_{sira}$ | $x^2$ | *sd* | *p* |
|---|---|---|---|---|---|---|
| Depression | City Center | 594 | 440.72 | 0.45 | 2 | 0.795 |
| | District | 245 | 437.4 | | | |
| | Village | 42 | 466 | | | |
| Anxiety | City Center | 594 | 433.12 | 3.25 | 2 | 0.197 |
| | District | 245 | 450.03 | | | |
| | Village | 42 | 499.82 | | | |
| Stress | City Center | 594 | 438.67 | 2.96 | 2 | 0.227 |
| | District | 245 | 435.43 | | | |
| | Village | 42 | 506.38 | | | |

In Table 6, it is seen that individuals living in the village have higher rank average in each of the sub-dimensions of depression ($x^2$ =0.45. p>0.05), anxiety ($x^2$ =3.25. p>0.05) and stress ($x^2$ =2.96. p>0.05). According to the mean ranks, it is seen that the city center is in the second place for the depression and stress sub-dimensions, and the district is the second for the anxiety sub-dimension. However, it is understood that the aforementioned differences are not statistically significant.

In the study, the effect of whether there was an increase in the workload during the pandemic process on the differentiation of psychological reactions was considered as a parameter.

**Table 7: Mann whitney-U analysis on DASS scores according to workload increase during the pandemic process**

| Dimension | Workload Increase | *N* | $\bar{x}_{rank}$ | $\sum_{\text{rank}}$ | *U* | *z* | *p* |
|---|---|---|---|---|---|---|---|
| Depression | No | 546 | 425.03 | 232068.5 | 82737.5 | -2.388 | 0.017 |
| | Yes | 335 | 467.02 | 156452.5 | | | |
| Anxiety | No | 546 | 425.99 | 232588.5 | 83257.5 | -2.281 | 0.023 |
| | Yes | 335 | 465.47 | 155932.5 | | | |
| Stress | No | 546 | 416.42 | 227367 | 78036 | -3.675 | 0 |
| | Yes | 335 | 481.06 | 161154 | | | |

The values in Table 7 show that the average rank of individuals who have increased workload during the pandemic process, in each of the depression (*U*=82737.500, *p*=0.017), anxiety (*U*=83257.500, *p*=0.023) and stress (*U*=78036.000, *p*=0.000), sub-dimensions are statistically significantly higher.

Another parameter considered in the study is the time individuals spend at home during the pandemic process. Kruskal Wallis Analysis was conducted to understand the effect of the time spent at home on psychological reactions during the pandemic.

**Table 8: Kruskal wallis analysis on DASS scores according to the time spent at home during the pandemic process**

| **Dimension** | **Groups** | *N* | $\bar{x}_{rank}$ | $x^2$ | *sd* | *p* |
|---|---|---|---|---|---|---|
| Depression | 8-12 hours | 100 | 383.31 | 10.272 | 2 | .006* |
| | 13-16 hours | 89 | 395.23 | | | |
| | 17 hours + | 692 | 455.22 | | | |
| Anxiety | 8-12 hours | 100 | 419.77 | 1.202 | 2 | 0.548 |
| | 13-16 hours | 89 | 459.16 | | | |
| | 17 hours + | 692 | 441.73 | | | |
| Stress | 8-12 hours | 100 | 422.28 | 3.242 | 2 | 0.198 |
| | 13-16 hours | 89 | 402.42 | | | |
| | 17 hours + | 692 | 448.67 | | | |

The values in Table 8 show that individuals who stay at home for more than 17 hours per day during the pandemic process have higher mean rank in the depression sub-dimension than the others. This is followed by those who spend 13-16 hours and 8-12 hours at home, respectively. It is seen that these differences are statistically significant ($\chi^2$ =10.272. p<0.05). It is seen that the differences between the groups in terms of anxiety ($\chi^2$ =1.202. p>0.05) and stress ($\chi^2$ =3.242. p>0.05) dimensions are not statistically significant.

**Discussion**

In this study, although the difference in scores of the gender anxiety sub-dimension was not statistically significant, it was observed that women's mean rank for each of the depression, anxiety, and stress sub-dimensions was higher than that of men. Current studies on the subject supporting this finding; It points out that the prevalence of depression, anxiety and stress is higher in women than men during the COVID-19 pandemic [1,3,7,8]. Regardless of the pandemic,

various epidemiological studies have shown that women are at higher risk of depression [9-11], higher in death anxiety [12], and more susceptible to stress and anxiety [13]. Therefore, given this sensitivity of women, it can be understood that they show more emotional reactions to the COVID-19 pandemic than men. On the other hand, during the pandemic days when they have to be confined to homes, the duties and responsibilities of women in the home environment increase more than men. Erdoğdu, Koçoğlu, and Sevim associated anxiety

and similar negative affect in women with this increase in workload during the pandemic process [14]. As a matter of fact, our findings show that individuals with increased workload during the pandemic process have significantly higher depression, anxiety and stress scores than those without.

The results of our study show that according to the marital status variable, single individuals have the highest mean rank in each of the dimensions of depression, anxiety, and stress. Supporting this finding, Scott et al. state that marriage plays a protective role for the onset of mental disorders [15]. Similarly, in a study investigating the psychological impact of the SARS epidemic in Singapore on healthcare workers in 2003, it was reported that single healthcare workers were 1.4 times more likely to experience psychiatric symptoms compared to married healthcare workers [16]. When the studies on the COVID-19 pandemic process were examined, it was reported in the study conducted by Polat and Coşkun on healthcare workers that the anxiety scores of single healthcare workers were significantly higher than the married ones [6]. On the other hand, in the research conducted on healthcare personnel who helped the process of combating COVID-19 in China, it was found that the traumatization status of married or divorced people was higher than singles. In addition, another study found that individuals with children and married individuals had higher anxiety rates [17]. This situation is associated with the intensity of the anxiety of infecting family members by married individuals [18]. In conclusion, since marriage involves many individual and cultural dynamics, it is usual to find different findings in studies on different populations. More comprehensive studies are needed in this field, including individual and cultural elements.

The results of our current study show that the highest mean rank for each of the depression, anxiety, and stress sub-dimensions belongs to individuals in the 18-30 age range. Except for the anxiety sub-dimension, it is noteworthy that as age increases, there is a regular decrease in the mean of depression and stress rank. In the anxiety sub-dimension, there is a relative increase in individuals over 50 years of age. Similarly, in the study by Sakaoğlu et al., it is seen that the state and trait anxiety scores of individuals between the ages of 50-59 are relatively high, although not statistically significant. The unexpected rise observed in both studies may be due to the fact that COVID-19 disease is known to be at higher risk of transmission and lethality in elderly [1]. With this exceptional situation, in our study, a general increase in depression, anxiety and stress scales was obtained as age decreased. As a matter of fact, Bilge and Bilge found a negative correlation between age and contagion anxiety in their study [19]. Similarly in the studies of Elbay et al. in which they examined doctors' depression, anxiety and stress levels during the COVID-19 pandemic process, it was observed that young individuals in these dimensions got higher scores [2]. One reason for the decrease in depression, anxiety, and stress scales with increasing age can be attributed to decreasing emotional reaction, increased emotional control, and psychological immunization to stressful experiences [20]. In addition, the protective role of crystallized intelligence against life events with increasing experience, suggested by Cattell, helps to explain this situation in one aspect [21]. The fact that individuals who are active workers in the society are mostly young adults, the workload increase during the pandemic period, or their extra impact from job losses may have caused them to get high scores in all scales [8,22,23].

Some researchers state that more anxiety among young people may be due to their greater access to information through social media, which can cause stress [24]. Supporting this hypothesis, in our findings, a parallel increase was observed in all three scales with the increase in the duration of social media use. While examining the subject, a cross-sectional study in which Li et al. investigated social media use and depression and anxiety levels on Chinese citizens is noteworthy [17]. The findings of the aforementioned study show that more than 80% of the participants (n=4872) were exposed to social media frequently between January 31 and February 2, 2020, and this exposure significantly increased their depression and anxiety

levels. In general, in social media, situations such as increase in negative experience and emotion sharing [25], excessive exposure to warnings that remind the seriousness of the disease and risk factors, exposure to news about service restrictions in transportation, health and many other areas [26], exposure to fake and exaggerated news [27] lead to trigger an increase in depression, anxiety, and stress levels. Summarizing and supporting these evaluations, Griffin, Dunwoody, and Zabala empirically demonstrated that the media has an increasing effect on disease anxiety [28].

A significant relationship was not found between the psychological reactions of individuals against the pandemic according to the settlement they live in (village, district, city center). However, [29] obtained a higher rate of depression among people living in urban areas. When the psychological effects of the COVID-19 pandemic process are evaluated by settlement unit, it is important when the sample is reached. Because the disease started in the cities in the first place and became a threat to small settlements in time. In this study, the fact that the data collection process coincided with a period when the people living in the city became accustomed to the epidemic to a certain extent and the individuals living in the village had just met concretely, may have caused the individuals living in the village to have relatively high scores, although it was statistically

insignificant. Generally, people are more psychologically affected by seeing the disease in their environment and relatives. As a matter of fact, in our findings, depression, anxiety and stress scale scores of individuals whose relatives were positive for COVID-19 were found to be higher. Study supports the findings [29,30].

Another parameter in the research is the time spent at home during the pandemic process. Accordingly, it is seen that individuals who stay at home for more than 17 hours per day during the pandemic process have a significantly higher average rank in the depression sub-dimension compared to the others, and the duration of staying at home does not have a significant effect on anxiety and stress levels. While individuals control the anxiety and stress feeling caused by the risk of contamination by spending more time at home during pandemic, the isolation exposed to contributes to the increase of depressive symptoms. Different studies reveal that isolation increases depressive affect in its various aspects [4,30]. In addition, the study of Hawryluck et al. on individuals who were quarantined during the SARS virus epidemic found that 28.9% of the participants exhibited PTSD symptoms and 31.2% depression symptoms [5]. Considering that the quarantine process brings social isolation for a long time, it is also significant in terms of the findings of the current research.

As a result, the COVID-19 pandemic process is being experienced as a challenging process all over the world. As in all challenging processes, the reactions of individuals against the pandemic differ. In this study, some variables that may be the source of these differences were evaluated and it was understood that gender, marital status, age, duration of social media use, relatives diagnosed as COVID-19 positive, staying at home and increased workload had significant effects on psychological reactions. It is important to identify vulnerable groups in order to provide more effective psychosocial support that is tried to be provided with limited resources during the pandemic period. In this respect, our research is thought to have important findings and benefit for practitioners and researchers.

**Limitation**

Our study is a cross-sectional study, and it provides information about a specific section of the

pandemic process, which has gained a different dimension every day. Therefore, this situation should be taken into consideration while generalizations are obtained from the findings of the study. Due to the risk of contamination, the questionnaires were collected through online forms. Therefore, the fact that a small number of individuals who do not have internet access could not be included in the sample may be considered as a limitation in this study targeting the general population.

**Suggestions**

It is predicted that the COVID -19 pandemic will continue for a period of time as a difficult and long process all over the world. In this process, more controlled use of social media and continuing social life and daily work to the extent permitted by the government are important for the protection of mental health. It should be taken into consideration that women, young people, those whose relatives are positive for COVID-19 and those whose workload increases in this process need more psychosocial support. There are conflicting findings in the literature regarding the impact of marital status on the COVID-19 pandemic process. There is a need to research the effect of marital status on the pandemic process in a more comprehensive way considering also cultural and personal differences. In the pandemic, which is a dynamic process, it will be meaningful to conduct longitudinal studies to reveal also the effect of changing conditions.

**References**

1. Zhou SJ, Zhang LG, Wang LL, Guo ZC, Wang JQ, Chen JC et al. "Prevalence and socio-demographic correlates of psychological health problems in chinese adolescents during the outbreak of COVID-19." European Child and Adolescent Psychiatry. 2020; 29(6): 749-758.

2. Elbay, Yeni R, Kurtulmuş A, Arpacıoğlu S & Karadere E. 2020. "Depression, anxiety, stress levels of physicians and associated factors in covid-19 pandemics." Psychiatry Research. 290, May; 1–5.

3. Wang C, Horby PW, Hayden FG &Gao GF. "A Novel Coronavirus Outbreak of Global Health Concern." The Lancet. 2020; 395(10223): 470-473.

4. Taylor HO, Taylor RJ, Nguyen AW, & Chatters L. "Social isolation, depression, and psychological distress among older adults." Journal of Aging and Health. 2018; 30(2): 229-46.

5. Hawryluck, Laura, Gold WL, Robinson S, Pogorski S, Galea S et al. "SARS control and psychological effects of quarantine, toronto, canada." Emerging Infectious Diseases. 2004; 10(7): 1206–12.

6. Polat O, & Coşkun F. "Determining the relationship between personal protective equipment uses of medical healthcare workers and depression, anxiety and stress levels in the covıd-19 pandemic." Medical Journal of Western Black Sea. 2020; 4(2): 51–58.

7. Liu D, Ren Y, Yan F, Li Y, Xu X, Yu X, et al. "Psychological impact and predisposing factors of the coronavirus disease 2019 (covid-19) pandemic on general public in china." SSRN Electronic Journal. 2020.

8. Moghanibashi-Mansourieh A. "Assessing the anxiety level of ıranian general population during covıd-19 outbreak." Asian Journal of Psychiatry. 2020; 51: 102076.

9. Girgus, Joan S & Yang K. "Gender and depression." Current Opinion in Psychology. 2015; 4: 53–60.

10. Rachel SH., Janet SH, & Lyn YA. "Gender differences in depression in representative national samples: Meta-analyses of diagnoses and symptoms." Psychological Bulletin. 2017; 143(8): 783–822.

11. Jitender S, Erickson J, Medved MI, Asmundson GJG, Enns MW, Stein M et al. "Risk factors for post-injury mental health problems." Depression and Anxiety. 2013; 30(4).

12. Acehan, Gülten, & Eker F. "Levels of death anxiety, death related depression of health personnel providing emergency medical services, and their coping methods." 2013; 4(1): 27–35.

13. Gao, Wenjuan, Ping S & Liu X. "Gender differences in depression, anxiety, and stress among college students: a longitudinal study from china." Journal of Affective Disorders. 2020; 263: 292–300.

14. Erdoğdu, Yeşim, Koçoğlu F & Sevim C. "An investigation of the psychosocial and demographic determinants of anxiety and hopelessness during covid-19 pandemic." J Clin Psy 2020; 23(2).

15. Scott KM, Wells JE, Angermeyer M, Brugha TS, Bromet E, Demyttenaere K etal. "Gender and the relationship between marital status and first onset of mood, anxiety and substance use disorders." Psychol Med 2010; 40(9): 1495–1505.

16. Chan, Angelina OM & Chan YH. "Psychological impact of the 2003 severe acute respiratory syndrome outbreak on health care workers in a medium size regional general hospital in singapore." Occupational Medicine. 2004; 54(3).

17. Li Z, Ge J, Yang M, Feng J, Qiao M, Jiang R et al. "Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control." Brain, Behavior, and Immunity. 2020; 88.

18. Sakaoğlu HH, Orbatu D, Emiroglu M, & Çakır O. "Spielberger state and trait anxiety level in healthcare professionals during the covid-19 outbreak: A case of tepecik hospital." The Journal of Tepecik Education and Research Hospital. 2020; 30: 1–9.

19. Bilge, Yildiz, & Bilge Y. "Koronavirüs salgini ve sosyal izolasyonun psikolojik semptomlar üzerindeki etkilerinin psikolojik sağlamlik ve stresle baş etme tarzlari açisindan incelenmesi." Klinik Psikiyatri Dergisi. 2020; 23.

20. Jorm, AF. "Does old age reduce the risk of anxiety and depression? a review of epidemiological studies across the adult life span." Psychological Medicine 2000; 30(1): 11-22.

21. Cattell & Raymond B. "Theory of fluid and crystallized intelligence: A critical experiment." Journal of Educational Psychology. 1963; 54(1).

22. Ahmed, Zahir Md, Ahmed O, Aibao Z, Hanbin S, Siyu L, et al. "Epidemic of COVID-19 in China and Associated Psychological Problems." Asian Journal of Psychiatry. 2020; 51.

23. Cao, Wenjun, Fang Z, Hou G, Han M, Xu X, et al. "The psychological impact of the covid-19 epidemic on college students in china." Psychiatry Research. 2020; 287.

24. Cheng, Cheng, Jun H & Liang B. "Psychological health diathesis assessment system: A nationwide survey of resilient trait scale for chinese adults." Studies of Psychology and Behavior. 2014; 12(6).

25. Sijia L, Wang Y, Xue J, Zhao N, & Zhu T. "The impact of covid-19 epidemic declaration on psychological consequences: A study on active weibo users." International Journal of Environmental Research and Public Health 2020; 17(6).

26. Anneliese D, Martin S, Karafillakis E, Preet R, Wilder-Smith A et al. "The pandemic of social media panic travels

faster than the covid-19 outbreak." Journal of Travel Medicine. 2020; 27(3): 1–2.

27. Aydin & Fikret A. "Disinformation in social media in post-truth period: The Covid-19 (New Coronavirus) pandem process." Academic Social Studies. 2020; 19(12): 76-90.

28. Griffin, Robert J, Dunwoody S, & Zabala F. "Public reliance on risk communication channels in the wake of a cryptosporidium outbreak." Risk Analysis. 1998; 18(4).

29. Özdin S, & Özdin SB. "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): 504–11.

30. Rolf S, Grinevich V, Han RT, Kim YB, Park EH, Ryu C et al. "Long-term ısolation elicits depression and anxiety-related behaviors by reducing oxytocin-ınduced gabaergic transmission in central amygdala." 2018.

**Correspondence author:** ***Esat Şanlı, Department of Educational Sciences, Ondokuz Mayis University (OMU), Samsun, Turkey***

**Email:** esat.sanli@omu.edu.tr

Received: 27 February 2021 Accepted: 23 March 2021