

# Investigation of the Efficiency of Psychological Support Videos as an Approach to the Protection of Mental Health of Medics During the Pandemic Process

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## ABSTRACT

**Background:** The aim of this study is to evaluate whether providing psychological support to healthcare professionals who are actively involved in the pandemic process will reduce the psychological risk factors created by the pandemic on healthcare professionals.

**Methods:** A total of 440 healthcare professionals working in different positions in 2 state hospitals, which are considered pandemic hospitals, were included in the study. Sociodemographic Data Form, Hospital Anxiety and Depression Inventory, and Psychological Resilience Scale were used in the study, which was carried out with the experimental design pre-test-post-test model before the experiment. Participants were made to watch 4 videos prepared by expert psychologists on anxiety, depression, and psychological resilience.

**Results:** The data obtained from the sample before and after watching the videos were analyzed with the paired sample *t*-test. Accordingly, there was a significant difference between the groups of health workers who participated in the survey before and after watching the psychological support videos ( $P < .001$ ). After watching the psychological support videos, the anxiety scores of the health workers decreased. In addition, anxiety scores created a significant difference in demographic variables (gender, age, marital status, not having a child, having a high education level, smoking and alcohol use, having a physiological disease, and working year). Depression scores decreased in those who use alcohol and those who have 1-3 shifts per month.

**Conclusions:** In disasters such as epidemics that bring psychosocial difficulties, psychotherapeutic support to those who fight in the first place is important in protecting their mental health.

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## INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic process first started with the detection of cases infected with the virus in China in November 2019.<sup>1</sup> This new type of virus was named “Coronavirus disease 2019 (COVID-19)” by the World Health Organization in February 2020. After the rapid spread of the disease worldwide and the increase in the number of cases and deaths, the COVID-19 outbreak was declared as a pandemic. Throughout history, the world has experienced many epidemics. If these epidemics spread rapidly among people and are caused by a new virus, these epidemics are considered as pandemics.<sup>2,3</sup> Studies conducted during the pandemic period show people experience especially depression<sup>4</sup> and various psychological problems such as post-traumatic stress disorder (PTSD),<sup>5</sup> anxiety disorders and sleep problems,<sup>6</sup> and burnout.<sup>7</sup> Studies showed that concerns and worries

about COVID-19 are not only by factors such as stress and loneliness but also by generalized anxiety,<sup>8</sup> professional burnout, anxiety, and depression.<sup>9</sup>

Health workers in all countries of the world and in our country are undoubtedly the actors of the pandemic process. After the COVID-19 epidemic was recognized as a pandemic by WHO in March 2020, it was defined as mandatory to protect the mental health of healthcare workers caring for people with COVID-19 for the long-term capacity of the workforce, and it was noted that it would be an important public health problem in the future. In terms of the impact of epidemic diseases on mental health, healthcare workers represent a particularly vulnerable group due to the high risk of infection, increased work stress, and fear of spreading to their families.<sup>10</sup> Occupational Safety and Health Administration evaluated healthcare

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professionals in the very high-risk group in terms of the risk of COVID-19 infection. Especially those who perform procedures that produce aerosols (intubation, cough induction, bronchoscopy, mouth-throat-nose examination, ophthalmological examinations, central catheterization, nebulizer use, cardiopulmonary resuscitation, oxygen therapy, non-invasive ventilation, some examinations with dental procedures, or invasive sample collection procedures), laboratory workers, physicians caring for patients, nurses, and allied health workers are defined as risk groups.<sup>11</sup> This risk may not only consist of the threat to biological health. In the studies conducted during the previous epidemic/pandemic processes, it has been reported that at least 1 out of 5 healthcare workers had symptoms of depression and anxiety, about 4 out of 10 health workers had sleep difficulties and/or insomnia, anxiety and depression rates were high for female health workers and care staff, and 1 out of every 6 healthcare workers had very severe stress symptoms.<sup>12</sup> After the 2003 SARS epidemic, it was reported that healthcare professionals who took an active role in the fight against the epidemic had high depression, anxiety, and post-traumatic stress scores 1 year after the epidemic.<sup>13</sup>

In a study conducted with healthcare professionals during the pandemic process, it was reported that 62% of the participants had minimal depression, 21.5% had mild depression, 13.5% had moderate depression, and 3% had severe depression.<sup>14</sup> According to the study by Kang et al, healthcare workers who are in direct contact with infected patients (resuscitation, pneumology, emergencies, etc.) have more symptoms of anxiety and depression, and even PTSD symptoms.<sup>15</sup> Serving traumatized people can also create trauma, even if they do not experience it directly. This situation is called “secondary trauma.” From security personnel to cleaners, from doctors to administrative personnel, all healthcare professionals are at risk of secondary trauma in crisis and disaster situations. It is known that secondary trauma also increases the risk of burnout. The COVID-19 outbreak poses a risk of burnout as it creates a crisis in the healthcare system. Burnout has been defined as an occupational disease, a psychological state in which people suffer due to emotional exhaustion, personal failure, and cutting off relationships with others.<sup>16</sup> Therefore, burnout is a condition that is

observed as a result of not being able to cope with the stress experienced and felt in the physiological, mental, and emotional areas. Studies on burnout have shown that interpersonal relationships, excessive workload, and one’s success in coping with stress are associated with burnout. Healthcare workers’ burnout may be another hidden cost of the pandemic in the future. After the SARS-CoV-1 epidemic, an increase in alcohol use disorder was determined with Beijing Hospital employees 3 years after the epidemic, and it was reported that this increase could be a way of coping with depression, PTSD, and burnout.<sup>17</sup>

However, during pandemics and other extraordinary times, resilience can be protective of mental health. Resilience is defined as a person’s process of adaptation, resilience, or ability to successfully cope with change/disasters against a trauma, a threat, a tragedy, or major stressors such as familial and relational difficulties, serious health problems, and workplace and financial problems. Kobasa<sup>18</sup> gathered the dimensions of psychological resilience under 3 main headings. These dimensions are named as dedication, control, and challenge. Dedication is being in contact with the different areas of life in which people are involved. Control, which is the belief in changing the course of events instead of giving up on the negativities experienced, includes individual freedom and the ability to make decisions and choices without being influenced by others. The challenge is to accept change as a normal event experienced during the day and believe that it is necessary for development. For the development of psychological resilience, a stressor must be encountered. Psychological resilience is important, especially for healthcare workers who face many risk factors during the pandemic process. There are studies in the literature that evaluate resilience in terms of health professionals.<sup>19</sup>

The main problem of this research is whether providing psychological support with psychoeducation content via video to healthcare professionals who are actively working during the pandemic process is effective in the protection of the mental health of healthcare professionals. The sub-problems created and tested in this context are as follows:

Is there a significant difference between the pre-test and post-test scores of watching psychological support videos in terms of anxiety score averages?

Is there a significant difference between the pre-test and post-test scores of watching psychological support videos in terms of depression score averages?

Is there a significant difference between the pre-test and post-test scores of watching psychological support videos in terms of mean scores of psychological resilience?

Is there a significant difference between the pre-test and post-test scores of watching psychological support videos in the relationship between anxiety, depression, and resilience mean scores and demographic variables?

#### MAIN POINTS

- After watching the psychological support videos, a statistically significant decrease was observed in the anxiety scores of health workers.
- After watching the psychological support videos, a partial decrease was observed in the depression scores of the health workers.
- After watching the psychological support videos, there was no statistically significant difference in the psychological resilience scores of the health workers.

## MATERIAL AND METHODS

This study was carried out with the experimental design pre-test-post-test model before the experiment. In experimental applications, in this model, the significance of the difference between the pre-test and post-test values belonging to a single group is measured. After the independent variable is applied to a certain group, measurements are performed before and after the experiment. The pre-test and post-test results of the variable belonging to the group are compared.

An application was made to the Sakarya University Ethics Committee for the research and the study was initiated with the protocol decision of the Ethics Committee dated 13.01.2021 and 30/07. Then, the work permit numbered E-18343338-434.99 was obtained from the Sakarya Governorship Provincial Health Directorate. With the written permissions obtained from the Provincial Health Directorate and the applications made to Sakarya Training and Research Hospital and Yenikent State Hospital, which were assigned as pandemic hospitals, and the permissions obtained, the work started. It started with the first group sample of 1470 healthcare professionals working in the mentioned hospitals between February 2021 and December 2021. The data collection tools used in the study were sent to them online. Informed consent was obtained from the participants before starting the study. After the pre-test data obtained with the data collection tools, 4 psychological support videos covering the protection of long-term psychological health in extraordinary situations were prepared by the METU (Middle East Technical University) Psychology Department Faculty Members, including the subjects of anxiety, depression, and psychological resilience in healthcare professionals; increased consumption of cigarettes, alcohol, caffeine, drugs, and coping methods in extraordinary situations; being aware of and controlling the psychological reactions of health workers; development of problem-solving skills; implementation of mindfulness-based approaches to prevent stress; teaching relaxation techniques; increasing psychological resilience levels with effective coping methods; and the relevant videos were broadcast on the website and social networking pages of Sakarya Provincial Health Directorate, integrated into the in-service training program, thus widespread and accessible psychosupport service was provided.

### Statistical Analysis

The post-test part of the research was conducted with a second sample of 440 people who filled in the same measurement tools after watching the videos. Statistical Package for the Social Sciences (SPSS) 21.0 package program (IBM SPSS Corp., Armonk, NY, USA) was used in the analysis of the data obtained from the same participants who participated in the pre-test and post-test part of the research.

### Data Collection Tools

**Sociodemographic Form:** It is a form that includes questions about age, gender, educational status, marital status, having children, ways of reaching work, years of work, number of shifts per month, daily contact times with the COVID-19 patient, alcohol and cigarette use, and whether they have a physiological disease.

**Hospital Anxiety and Depression Scale:** The Hospital Anxiety and Depression (HAD) scale developed by Zigmond and Snaith is used as a self-report tool used to determine the risk of anxiety and depression in individuals, to measure the level and change in severity, and to evaluate the individual's self. The Turkish validity and reliability studies of the scale were reported as 0.85 for the anxiety subscale and 0.77 for the depression subscale. Cut-off scores were determined as 10 for the anxiety subscale and 7 for the depression subscale. A 4-point Likert-type evaluation is used to answer the scale, which consists of 14 questions.<sup>20</sup> In this study, the anxiety factor of the scale was 0.86, the depression factor was 0.87, and the whole scale was 0.90. These Cronbach's alpha coefficients show that the scale is quite reliable.

**Resilience Scale:** The Resilience scale (PBL), which was developed to determine the resilience levels of individuals, has 21 items and 3 sub-dimensions. The Cronbach alpha reliability coefficients for these sub-dimensions called dedication, control, and challenge were reported to be between 0.62 and 0.74, and the Cronbach alpha reliability coefficient for the whole scale was reported as 0.76.<sup>21</sup>

In this study, Cronbach's alpha coefficients of the sub-factors for PBL were measured as 0.85 for challenge, 0.81 for devotion, and 0.84 for control, and it was concluded that the factors were quite reliable. For the whole scale, it was measured as 0.90.

### Process

All of the data collected by HAD and PBL were analyzed using SPSS version 21.0, the significance was tested at the .05 level, and other significance levels were also specified. While performing the analyses, the internal consistency of the scales used in the study was tested and the Cronbach's alpha values of the scales were found to be 0.86 for anxiety, 0.87 for depression, and 0.90 for the whole scale in the HAD scale. In the PBL scale, Cronbach's alpha coefficients of the sub-factors were measured as 0.85 for the challenge, 0.81 for the dedication, 0.84 for the control, and 0.90 for the whole scale, and it was concluded that the factors were quite reliable. Then, normality tests of HAD and PBL scale scores were checked. Kolmogorov-Smirnov test was used for the normality test. According to Kolmogorov-Smirnov normality tests, it was concluded that all scales used in the questionnaires were normally distributed because the *P* value was less than .05. Frequency analysis was used for the demographic characteristics of the participants.

Paired sample *t*-test was used in the analysis in which psychological support videos were investigated whether they were effective or not. As it is known, paired sample *t*-test is used to test the significance of the difference between the arithmetic means of 2 related groups, provided that  $n > 30$  and the normality of the distribution is met. In this study, 440 participants first filled out the HAD and PBL scales. The statistical averages of the scores obtained from the scales were taken, and then they were asked to fill in the same scales a second time after watching the psychological support videos. The arithmetic averages of the scores obtained from the scales filled for the second time were also taken and the difference between them was tested.

## RESULTS

To measure the effect of psychological support videos, the paired sample *t*-test was applied and the results are shown in Table 1. According to the paired sample *t*-test, when the factor scores of the health professionals who participated in the survey were examined before and after watching the psychological support videos, there was a significant difference between the anxiety score averages of the groups before and after watching the psychological support videos ( $P < .001$ ). While  $\bar{X}$  was 9.85 and SD was 1.97 before watching the videos, after watching them  $\bar{X}$  was determined as 7.44 and SD was determined as 1.48. After watching the psychological support videos, it was observed that the anxiety scores of the health workers decreased. On the other hand, the mean scores of depression ( $P=.295$ ) and resilience factors, that is, challenge ( $P=.365$ ), dedication ( $P=.789$ ), and control ( $P=.652$ ), did not cause a significant difference between the groups before and after watching the videos.

According to the paired sample *t*-test, the anxiety score averages before and after watching the videos provided a significant difference for men and women. Anxiety scores of both female ( $P < .001$ ) and male ( $P < .001$ ) healthcare professionals decreased after watching psychological videos. Before watching the psychological support videos,  $\bar{X}$  was determined as 10.46 for female participants, and after watching them,  $\bar{X}$  was determined as 8.45 and SD was determined as 4.52. For male participants,  $\bar{X}$  was

determined as 7.54 before watching the videos and after watching them.  $\bar{X}$  was determined as 6.32 and SD was determined as 4.88. On the other hand, the mean scores of challenge, dedication, and control, which are depression and resilience factors, did not provide a significant difference for men and women. When the age variable is examined, there is a significant difference in anxiety score averages under 25 years old group ( $P < .001$ ), 26-35 years old group ( $P < .001$ ), and over 56 years old group ( $P < .001$ ), while there is no difference in other age groups. For 25 years old group and under,  $\bar{X}$  was determined as 10.99 before watching the videos and after watching them  $\bar{X}$  was determined as 7.19 and SD was determined as 4.55. For the 26-35 years old group,  $\bar{X}$  was determined as 10.65 before watching the videos and after watching them  $\bar{X}$  was determined as 7.46 and SD was determined as 4.50. For 56 years old group and over, before watching the videos  $\bar{X}$  was determined as 8.50 and after watching them  $\bar{X}$  was 4.54 and SD was determined as 4.96. On the other hand, the mean scores of challenge, dedication, and control, which are depression and resilience factors, did not cause a significant difference between age variables. In terms of the marital status variable, mean anxiety scores caused a significant difference in both married ( $P < .001$ ) and single ( $P < .001$ ). For married participants,  $\bar{X}$  was determined as 9.02 before watching the videos and after watching them  $\bar{X}$  was determined as 7.48 and SD was determined as 4.61. For single participants, before watching the videos  $\bar{X}$  was determined as 11.03 and after watching them  $\bar{X}$  was determined as 7.36 and SD was determined as 4.67. On the other hand, the mean scores of challenge, dedication, and control, which are depression and resilience factors, did not cause a significant difference between marital status variables. In the variable of having children, the anxiety scores of those who had children ( $P=.063$ ) did not cause a significant difference, while the anxiety scores of those who did not have children ( $P < .001$ ) decreased after watching the psychological videos. For participants who have no children, before watching the videos  $\bar{X}$  was determined as 10.84 in the anxiety score and after watching them  $\bar{X}$  was determined as 7.20 and SD was determined as 4.43. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are depression and resilience factors. When the education variable is examined, the anxiety scores of university graduates ( $P < .001$ ), participants that have a master's degree ( $P < .001$ ), and doctoral graduates ( $P < .001$ ) decreased after watching psychological videos, but for high school graduates ( $P=.251$ ) and college graduates ( $P=.085$ ), there was no statistically significant change in anxiety scores. In addition, high school graduates' depression scores ( $P < .001$ ) increased after watching the videos. For university graduates, before watching the videos  $\bar{X}$  was determined as 10.15 in the anxiety score and after watching them  $\bar{X}$  was determined as 7.51 and SD was determined as 4.52. For participants who have a master's

**Table 1.** Paired Sample *t*-Test Results for the Effect of Psychological Support Videos

Factor	$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	<i>P</i>
Anxiety	9.85	1.97	7.44	1.48	<.001
Depression	9.09	1.51	9.22	1.84	.295
Challenge	26.22	4.37	25.99	5.19	.365
Dedication	16.75	2.79	16.86	3.37	.789
Control	18.23	3.03	18.96	3.16	.652

SD, standard deviation.



**Table 2.** Paired Sample *t*-Test Results for the Effects of Gender, Age, Marital Status, Having a Child, and Educational Status Variables on Psychological Supportive After Watching the Videos

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	P
Gender						
Anxiety	Woman	10.46	6.53	8.45	4.52	<.001
	Man	7.84	6.40	6.32	4.88	<.001
Depression	Woman	9.24	3.36	9.11	3.23	.263
	Man	8.61	3.07	9.36	3.78	.125
Challenge	Woman	26.22	5.24	26.34	5.55	.994
	Man	26.23	5.24	25.98	5.70	.752
Dedication	Woman	16.59	5.31	16.01	5.47	.852
	Man	17.26	5.66	17.36	5.76	.779
Control	Woman	18.08	3.91	18.05	3.90	.952
	Man	18.70	4.23	18.21	4.18	.959
Age						
Anxiety	25 years and under	10.99	8.25	7.19	4.45	<.001
	26-35	10.65	7.69	7.46	4.50	<.001
	36-45	9.04	5.11	8.38	4.93	.123
	46-55	7.17	4.51	6.83	4.17	.089
	56 years and older	8.50	8.91	4.54	4.96	<.001
Depression	25 years and under	8.99	2.24	9.76	3.01	.077
	26-35	9.66	3.59	9.54	3.47	.885
	36-45	9.02	3.44	9.27	3.56	.625
	46-55	8.09	4.09	8.08	3.27	.849
	56 years and older	7.83	2.53	8.08	2.78	.521
Challenge	25 years and under	26.33	6.34	25.99	6.00	.859
	26-35	26.01	5.32	25.86	5.17	.758
	36-45	26.48	5.54	26.35	5.41	.962
	46-55	24.66	5.80	25.01	6.15	.789
	56 years and older	24.62	6.13	24.89	6.40	.998
Dedication	25 years and under	16.28	5.76	16.33	5.81	.999
	26-35	16.59	5.41	16.36	5.18	.903
	36-45	16.70	5.85	16.52	5.67	.952
	46-55	18.21	6.11	17.78	5.67	.562
	56 years and older	17.83	5.85	17.52	5.54	.908
Control	25 years and under	17.90	4.34	17.62	4.06	.902
	26-35	18.51	4.42	18.02	3.93	.911
	36-45	18.32	4.72	17.62	4.02	.852
	46-55	18.05	3.92	18.09	3.96	.895
	56 years and older	17.16	1.78	18.01	2.63	.665
Marital status						
Anxiety	Married	9.02	6.15	7.48	4.61	<.001
	Single	11.03	8.34	7.36	4.67	<.001
Depression	Married	8.79	3.04	9.13	3.38	.097
	Single	9.52	3.44	9.42	3.32	.936
Challenge	Married	26.46	6.09	25.78	5.41	.094
	Single	25.89	5.36	26.32	5.79	.096
Dedication	Married	17.16	5.27	17.36	5.47	.965
	Single	16.16	5.50	16.25	5.59	.998

(Continued)

**Table 2.** Paired Sample t-Test Results for the Effects of Gender, Age, Marital Status, Having a Child, and Educational Status Variables on Psychological Supportive After Watching the Videos (*Continued*)

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	P
Control	Married	18.63	3.86	18.65	3.88	.953
	Single	17.67	4.69	17.02	4.04	.985
Having children						
Anxiety	Yes	8.83	5.98	7.62	4.77	.063
	No	10.84	8.07	7.20	4.43	<.001
Depression	Yes	8.87	3.14	9.19	3.46	.697
	No	9.35	3.28	9.32	3.25	.936
Challenge	Yes	26.29	5.65	26.21	5.57	.994
	No	26.16	5.17	26.60	5.61	.996
Dedication	Yes	17.47	5.48	17.65	5.66	.805
	No	16.04	4.87	16.53	5.36	.798
Control	Yes	18.49	3.83	18.42	3.76	.953
	No	17.98	4.15	18.03	4.20	.872
Educational status						
Anxiety	High school	8.75	5.16	8.02	4.43	.251
	Associate's degree	9.83	5.68	8.64	4.49	.085
	University	10.15	7.16	7.51	4.52	<.001
	Master	9.73	6.88	6.92	4.07	<.001
	Doctor's Degree	7.57	7.15	5.05	4.63	<.001
Depression	High school	8.64	2.88	10.36	3.06	<.001
	Associate's degree	9.61	4.28	8.86	3.53	.062
	University	9.11	3.51	9.13	3.50	.985
	Master	9.40	4.31	8.35	3.26	.094
	Doctor's Degree	7.84	2.27	8.68	3.11	.062
Challenge	High school	26.28	7.65	25.74	7.11	.105
	Associate's degree	26.43	6.52	25.78	5.87	.111
	University	26.32	6.31	25.92	5.91	.201
	Master	24.13	5.86	24.52	6.25	.885
	Doctor's Degree	27.21	7.72	25.98	6.49	.062
Dedication	High school	17.55	6.34	17.03	5.82	.954
	Associate's degree	16.54	5.27	16.52	5.25	.902
	University	16.78	5.38	17.03	5.63	.526
	Master	15.23	4.88	16.02	5.67	.328
	Doctor's Degree	17.68	4.84	18.25	5.41	.086
Control	High school	18.57	5.90	17.02	4.35	.058
	Associate's degree	17.92	5.93	17.36	5.37	.965
	University	18.35	4.22	17.98	3.85	.258
	Master	18.52	4.12	18.36	3.96	.964
	Doctor's Degree	18.23	2.18	18.39	2.34	.921

SD, standard deviation.

degree, before watching the videos  $\bar{X}$  was determined as 9.73 and after watching the videos  $\bar{X}$  was determined as 6.92 and SD was determined as 4.07. For doctoral graduates, before watching the videos  $\bar{X}$  was determined as 7.57 and after watching them  $\bar{X}$  was determined as 5.05 and SD was determined as 4.63. For high school graduates,

before watching the videos  $\bar{X}$  was determined as 8.64 in the depression score and after watching videos  $\bar{X}$  was determined as 10.36 and SD was determined as 3.06. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are resilience factors. The results are presented in Table 2.

**Table 3.** Paired Sample *t*-Test Results for the Effects of Position/Title, Working Year, and Way of Accessing Work Variables on Psychological Support

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	<i>P</i>
Position/title						
Anxiety	Doctor	7.90	7.02	5.52	4.64	<.001
	Nurse/midwife/health officer	10.18	6.62	8.25	4.69	<.001
	Data entry staff	8.15	4.45	7.59	3.89	.085
	Cleaning staff	6.61	2.51	8.63	4.53	<.001
Depression	Doctor	8.87	4.89	8.54	4.56	.589
	Nurse/midwife/health officer	9.12	3.51	8.89	3.28	.096
	Data entry staff	10.07	3.66	9.66	3.25	.639
	Cleaning staff	8.07	1.12	10.87	2.69	<.001
Challenge	Doctor	23.83	4.00	24.85	5.02	.352
	Nurse/midwife/health officer	26.28	5.79	25.63	5.53	.096
	Data entry staff	27.84	8.69	26.32	5.14	.256
	Cleaning staff	28.53	6.68	29.02	7.17	.115
Dedication	Doctor	14.83	3.47	15.86	4.50	.063
	Nurse/midwife/health officer	16.72	4.80	17.52	5.60	.115
	Data entry staff	18.07	4.26	17.33	3.52	.106
	Cleaning staff	20.84	4.76	21.52	5.44	.082
Control	Doctor	17.41	1.73	18.63	2.95	.099
	Nurse/midwife/health officer	18.22	4.07	18.21	4.06	.985
	Data entry staff	18.53	2.07	18.75	2.29	.865
	Cleaning staff	18.23	4.29	18.36	4.42	.954
Working year						
Anxiety	0-5 years	11.00	7.45	7.90	4.35	<.001
	6-10 years	10.92	7.78	7.71	4.57	<.001
	11-15 years	7.67	4.28	7.46	4.07	.253
	16 years and over	8.68	6.73	6.94	4.99	<.001
Depression	0-5 years	9.17	2.55	9.68	3.06	.625
	6-10 years	10.42	4.39	9.59	3.56	.203
	11-15 years	8.62	2.30	9.65	3.33	.105
	16 years and over	8.50	3.57	8.30	3.37	.695
Challenge	0-5 years	26.17	20.17	24.36	6.00	.121
	6-10 years	25.44	4.54	25.63	4.73	.852
	11-15 years	27.75	5.74	26.58	4.57	.362
	16 years and over	26.06	5.90	25.89	5.73	.321
Dedication	0-5 years	16.64	5.22	17.03	5.61	.176
	6-10 years	15.72	4.86	15.99	5.13	.992
	11-15 years	17.82	5.45	17.33	4.96	.901
	16 years and over	16.99	5.98	16.85	5.84	.998
Control	0-5 years	18.13	3.16	19.03	4.06	.105
	6-10 years	18.29	3.87	18.52	4.10	.698
	11-15 years	18.78	3.73	18.49	3.44	.875
	16 years and over	18.09	4.26	17.85	4.02	.498
Way of accessing work						
Anxiety	Personal car	8.98	6.87	6.82	4.71	<.001
	Public transport	10.60	7.11	7.79	4.30	<.001
	On foot	10.67	7.27	8.67	5.27	<.001

(Continued)

**Table 3.** Paired Sample t-Test Results for the Effects of Position/Title, Working Year, and Way of Accessing Work Variables on Psychological Support (*Continued*)

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	P
Depression	Personal car	8.71	3.37	8.70	3.36	.980
	Public transport	9.40	3.30	9.51	3.41	.982
	On foot	9.52	2.45	10.30	3.23	.251
Challenge	Personal car	26.09	4.59	26.95	5.48	.952
	Public transport	25.95	6.77	24.83	5.65	.835
	On foot	27.14	5.58	27.20	5.64	.902
Dedication	Personal car	16.80	6.15	16.36	5.71	.920
	Public transport	16.50	4.73	16.98	5.21	.952
	On foot	17.11	4.82	18.06	5.77	.852
Control	Personal car	18.33	4.81	17.59	4.07	.404
	Public transport	17.94	3.90	17.63	3.59	.952
	On foot	18.56	4.62	18.39	4.45	.995

SD, standard deviation.

According to the paired sample *t*-test, the anxiety scores of physicians ( $P < .001$ ), nurses, midwives, and health personnel ( $P < .001$ ) decreased after watching the psychological videos, but in the cleaning staff ( $P < .001$ ), anxiety and depression scores increased. In addition, the depression scores ( $P < .001$ ) of the cleaning staff increased after watching the videos. For physicians, before watching the videos  $\bar{X}$  was determined as 7.90 in the anxiety score and after watching the videos  $\bar{X}$  was determined as 5.52 and SD was determined as 4.64. For nurses, midwives, and health personnel, before watching the videos  $\bar{X}$  was determined as 10.18 in the anxiety score and after watching them  $\bar{X}$  was determined as 8.25 and SD was determined as 4.69. For the cleaning staff, before watching the videos  $\bar{X}$  was determined as 6.61 in the anxiety score and  $\bar{X}$  was determined as 8.07 in the depression score and after watching the videos  $\bar{X}$  was determined as 8.63 and SD was determined as 4.53 in the anxiety score and  $\bar{X}$  was determined as 10.87 and SD was determined as 2.69 in the depression score. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are resilience factors. In the working year variable, the anxiety scores of those with 0-5 years of work history ( $P < .001$ ), those who worked for 6-10 years ( $P < .001$ ), and those who worked for 16 years or more ( $P < .001$ ) decreased after watching psychological videos. For those with 0-5 years of work history, before watching the videos  $\bar{X}$  was determined as 11.00 and after watching them  $\bar{X}$  was determined as 7.90 and SD was determined as 4.35. For those with 6-10 years of work history, before watching the videos  $\bar{X}$  was determined as 10.92 and after watching them  $\bar{X}$  was determined as 7.71 and SD was determined as 4.57. For those who worked for 16 years and more, before watching the videos  $\bar{X}$  was determined as 8.68 and after watching them  $\bar{X}$  was determined as 6.94 and SD was determined as 4.99. There was no statistically significant change in anxiety scores of

healthcare workers ( $P = .253$ ) who had a working period of 11 to 15 years. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are depression and resilience factors. In the transportation variable, the anxiety scores of those who reach the workplace by personal vehicle ( $P < .001$ ), those who use public transportation ( $P < .001$ ), and those who walk to the workplace ( $P < .001$ ) decreased after watching the psychological videos. For those who get to the workplace by personal vehicle, before watching the videos  $\bar{X}$  was determined as 8.98 and after watching them  $\bar{X}$  was determined as 6.82 and SD was determined as 4.71. For those who use public transportation, before watching the videos  $\bar{X}$  was determined as 10.60 and after watching them  $\bar{X}$  was determined as 7.79 and SD was determined as 4.30. For those who walk to the workplace, before watching the videos  $\bar{X}$  was determined as 10.67 and after watching them  $\bar{X}$  was determined as 8.67 and SD was determined as 5.27. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are depression and resilience factors. The results are shown in Table 3.

When Table 4 is examined, the anxiety scores of both smokers ( $P < .001$ ) and non-smokers ( $P < .001$ ) according to the paired sample *t*-test decreased after watching the psychological videos. For smokers, before watching the videos  $\bar{X}$  was determined as 8.83 and after watching them  $\bar{X}$  was determined as 7.88 and SD was determined as 4.98. For non-smokers, before watching the videos  $\bar{X}$  was determined as 10.84 and after watching them  $\bar{X}$  was determined as 7.10 and SD was determined as 4.53. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are depression and resilience factors. In addition, anxiety scores of both alcohol users ( $P < .001$ ) and non-alcoholics ( $P < .001$ ) decreased after watching psychological videos. For alcohol users, before watching



**Table 4.** Paired Sample *t*-Test Results for the Effects of Smoking and Alcohol Use and Having a Physiological Disease Variables on Psychological Support

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	<i>P</i>
Smoking use						
Anxiety	Yes	8.83	5.93	7.88	4.98	<.001
	No	10.84	8.27	7.10	4.53	<.001
Depression	Yes	8.87	3.21	9.28	3.62	.043
	No	9.35	3.31	9.19	3.15	.625
Challenge	Yes	26.35	6.31	26.02	5.62	.085
	No	26.15	6.07	26.36	5.56	.856
Dedication	Yes	16.83	5.92	16.52	5.61	.805
	No	16.69	5.09	17.11	5.51	.520
Control	Yes	18.46	4.22	18.30	4.06	.961
	No	18.06	4.43	17.54	3.91	.852
Alcohol use						
Anxiety	Yes	11.32	10.28	6.27	5.23	<.001
	No	9.64	6.53	7.74	4.63	<.001
Depression	Yes	10.38	5.58	8.96	4.16	.005
	No	8.89	2.81	9.30	3.22	.095
Challenge	Yes	26.59	6.95	24.85	5.21	.102
	No	26.19	5.83	25.96	5.60	.756
Dedication	Yes	16.44	6.20	15.89	5.65	.358
	No	16.79	6.31	16.01	5.53	.995
Control	Yes	18.48	3.95	17.95	3.42	.256
	No	18.20	3.86	18.39	4.05	.995
Having a physiological disease						
Anxiety	Yes	10.07	7.07	7.91	4.91	<.001
	No	9.79	6.79	7.70	4.70	<.001
Depression	Yes	9.41	3.41	9.65	3.65	.885
	No	9.02	3.02	9.31	3.31	.802
Challenge	Yes	25.63	5.63	25.41	5.41	.992
	No	26.40	6.40	25.63	5.63	.632
Dedication	Yes	15.79	5.79	15.04	5.04	.895
	No	17.01	5.01	17.66	5.66	.903
Control	Yes	17.51	3.51	17.87	3.87	.962
	No	18.43	3.43	18.99	3.99	.938

SD, standard deviation.

the videos  $\bar{X}$  was determined as 11.32 and after watching them  $\bar{X}$  was determined as 6.27 and SD was determined as 5.23. For non-alcoholics, before watching the videos  $\bar{X}$  was determined as 9.64 and after watching the videos  $\bar{X}$  was determined as 7.74 and SD was determined as 4.63. In addition, when the effect of the alcohol variable on the depression factor was examined, the depression scores of the alcohol users decreased after the psychological support videos ( $P=.005$ ). The depression score was determined as 10.38 before watching the videos and after watching them  $\bar{X}$  was determined as 8.96 and SD was determined as 4.16. There was no significant difference in non-alcoholics ( $P=.095$ ). On the other

hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are resilience factors. In addition, anxiety scores decreased after watching psychological videos in both patients with the physiological disease ( $P < .001$ ) and those without ( $P < .001$ ). For those with physiological disease, before watching the videos  $\bar{X}$  was determined as 10.07 and after watching them  $\bar{X}$  was determined as 7.91 and SD was determined as 4.91. For those without physiological disease, before watching the videos  $\bar{X}$  was determined as 9.79 and after watching them  $\bar{X}$  was determined as 7.70 and SD was determined as 4.70. On the other hand, no significant difference was found in the mean scores of

**Table 5.** Paired Sample *t*-Test Results for the Effects of the Variables of the Number of Shifts in a Month and the Duration of Contact with a COVID-19-Positive Patient in a Working Day on Psychological Support

		$\bar{X}$ (First)	SD	$\bar{X}$ (Last)	SD	<i>P</i>
Number of shift						
Anxiety	1-3	9.80	6.99	7.34	4.53	<.001
	4-7	9.61	7.26	7.21	4.86	<.001
	More than 7	10.78	6.84	8.66	4.72	<.001
Depression	1-3	9.70	7.30	6.94	4.54	<.001
	4-7	8.68	3.03	8.66	3.01	.952
	More than 7	9.49	4.21	8.66	3.38	.265
Challenge	1-3	25.36	6.08	24.99	5.71	.067
	4-7	27.47	6.04	26.85	5.42	.085
	More than 7	25.79	5.16	26.35	5.72	.096
Dedication	1-3	16.36	5.46	17.02	6.12	.125
	4-7	17.75	5.02	18.26	5.53	.109
	More than 7	16.27	4.90	16.98	5.61	.963
Control	1-3	18.46	4.03	17.91	3.48	.106
	4-7	19.56	5.16	18.36	3.96	.061
	More than 7	17.77	3.77	18.04	4.04	.109
Duration of contact with a COVID-19-positive patient						
Anxiety	Less than 1 hour	9.98	6.98	7.87	4.87	<.001
	1-8 hours	9.06	6.06	7.85	4.85	<.001
	More than 8 hours	11.3	7.34	8.84	4.81	<.001
Depression	Less than 1 hour	8.83	3.83	8.17	3.17	.757
	1-8 hours	9.43	3.43	9.76	3.76	.665
	More than 8 hours	9.98	6.98	9.67	3.67	.867
Challenge	Less than 1 hour	26.68	6.68	25.94	5.94	.442
	1-8 hours	25.88	5.88	25.76	5.76	.963
	More than 8 hours	25.66	5.66	26.07	6.07	.859
Dedication	Less than 1 hour	17.14	5.14	17.12	5.12	.998
	1-8 hours	17.00	6.00	16.98	5.98	.998
	More than 8 hours	15.52	5.52	15.46	5.46	.999
Control	Less than 1 hour	18.32	4.32	18.00	4.00	.915
	1-8 hours	18.24	3.24	18.77	3.77	.901
	More than 8 hours	17.76	3.76	18.62	4.62	.231

SD, standard deviation.

challenge, dedication, and control, which are depression and resilience factors.

According to the paired sample *t*-test, the anxiety scores of those with 1-3 shifts ( $P < .001$ ), employees with 4-7 shifts ( $P < .001$ ), and healthcare workers with more than 7 shifts ( $P < .001$ ) were higher after watching the psychological videos then decreased. For those with 1-3 shifts a month, before watching the videos  $\bar{X}$  was determined as 9.80 and after watching them  $\bar{X}$  was determined as 7.34 and SD was determined as 4.53. For those with 4-7 shifts a month, before watching the videos  $\bar{X}$  was determined as 9.61 and after watching them  $\bar{X}$  was determined as 7.21 and SD was determined as 4.86. For those with more than 7 shifts a month, before watching the videos  $\bar{X}$  was determined as

10.78 and after watching them  $\bar{X}$  was determined as 8.66 and SD was determined as 4.72. In addition, after watching the videos, the depression scores of the healthcare professionals who were on duty 1-3 times were decreased ( $P < .001$ ). For those with 1-3 shifts a month, before watching the videos  $\bar{X}$  was determined as 9.70 and after watching them  $\bar{X}$  was determined as 6.94 and SD was determined as 4.54. On the other hand, no significant difference was found in the mean scores of challenge, dedication, and control, which are resilience factors. When the contact variable is examined, the anxiety scores of those who have contact time with COVID-19-positive patients for less than 1 hour ( $P < .001$ ), employees with 1-8 contact times ( $P < .001$ ), and healthcare workers who have more than 8 hours

of contact time ( $P < .001$ ) decreased after watching the videos. For those who have contact with COVID-19-positive patients for less than 1 hour, before watching the videos  $\bar{X}$  was determined as 9.98 and after watching them  $\bar{X}$  was determined as 7.87 and SD was determined as 4.87. For those with 1-8 hours of contact, before watching the videos  $\bar{X}$  was determined as 9.06 and after watching them  $\bar{X}$  was determined as 7.85 and SD was determined as 4.85. For those with more than 8 hours of contact, before watching the videos  $\bar{X}$  was determined as 11.37 and after watching them  $\bar{X}$  was determined as 8.84 and SD was determined as 4.81. On the other hand, no significant difference was found in depression and resilience factors (challenge, dedication, and control). The results are presented in Table 5.

## DISCUSSION

The first of the research results include the results obtained regarding anxiety scores. According to the results of analysis, there was a significant difference between the groups of anxiety score averages before and after watching the psychological support videos. After watching the psychological support videos, it was observed that the anxiety scores of the health workers decreased. When examined in terms of demographic variables, health workers participating in the survey in both women and men; married and unmarried; those who do not have children; in the age variable (under 25 years old, 26-35 years old, and 56 years and over); in the education variable (university, master's, and doctoral graduates); in the position/title variable (physician, nurse, midwife, health personnel, and data entry personnel); in the working year variable (those who have been working for 0-10 years and for 16 years or more); in the transportation variable (those who come to work on their own vehicle, those who arrive by public transport, and those who reach work on foot); those who use cigarettes and alcohol; those who have a physiological disorder; in the variable of the number of shifts per month, in all groups (1 to 3 shifts, 3 to 7 shifts, more than 7 shifts); in all groups (less than 1 hour, between 1 and 8 hours, more than 8 hours) during contact with a COVID-19-positive patient (less than 1 hour, between 1 and 8 hours, more than 8 hours), anxiety scores are decreased.

Our research finding is supported by the literature. In many studies conducted during the COVID-19 process, it has been reported that anxiety symptoms, anxiety levels, and stress symptoms are high in humans.<sup>22</sup> It is stated that the pandemic causes negative emotional reactions such as anxiety, fear, and anger in adults and increases their stress levels as well as their susceptibility to psychological disorders such as anxiety disorders. It is also reported that the pandemic causes health workers struggling with the epidemic in the field to have symptoms related to

anxiety disorders and their effective problem-solving skills to be reduced due to the stress and conflicts they experience.<sup>23</sup>

From the perspective of healthcare professionals, the prevalence of COVID-19 in the general population, its novel, unpredictable, and highly infectious nature, the need for physical distancing and isolation, and the associated high morbidity and mortality rates render conventional coping styles dysfunctional and necessitate adapting to new crisis and ways of thinking about the crisis. It creates a burden on all health workers. In the process, not only the sick individuals/society but also the healthcare professionals are affected physically and psychosocially by the process, as they are both members of the society and work at the forefront under serious risk. It is seen that it affects especially features such as long working hours, working with protective equipment that makes it difficult to work, being away from family and social support sources, risk of disease transmission, and witnessing the loss of caregivers/teammates.<sup>24</sup>

It is important to note that approaches to the protection of the mental health of healthcare professionals are important; in these approaches, individuals/healthcare professionals can be aware of and control their psychological reactions, develop problem-solving skills, and replace irrational cognitions that cause psychosocial problems with rational ones. In terms of preventive mental health,<sup>25</sup> the application of anti-stress awareness-based approaches in the psychological intervention and psychotherapeutic process, teaching relaxation techniques, and in risky periods such as epidemics, it is important to identify ineffective ways of coping and to teach effective coping methods instead of them, and to offer psychological support programs that can help increase their psychological resilience by emphasizing their strengths.<sup>26</sup> It is well-known in the literature that healthcare workers are informed about how to protect themselves from danger and that adequate and appropriate psychosocial support practices prevent the development of psychopathology. Stress and coping techniques in the psychological support videos prepared in our study; relaxation exercises; effective coping techniques; systematic thinking errors such as rumination, overgeneralization, all or nothing thinking were committed.

Another finding related to anxiety scores is that there was no change in anxiety scores after watching psychological support videos in participants aged 36-45 and working for 11-15 years. This finding was evaluated as showing a correlation with the average working year of 11-15 for those aged 36-45. The lack of change in anxiety scores in the 36-45 age group can also be explained by the fact that this age group has children. In addition to the anxiety created by the pandemic, the reasons such as the fact that children stayed at home during the mentioned period continuing their education online and that family relations may have been disrupted due to limitations,

increased parenting burden of healthcare professionals in the care and education processes of their children, and the anxiety that they could infect their children with COVID-19 also cause stress and anxiety may have increased. The absence of a decrease in those who have children is a finding consistent with the literature. There are studies reporting that the anxiety and stress levels of people who have children are higher than those who do not have children and that the thought that their children will catch COVID-19 may cause higher anxiety in people.<sup>27</sup>

The second finding of the study is related to depression scores. According to the results of analysis, which was conducted to analyze the effect of psychological support videos, when the factor scores formed before and after watching the psychological support videos of the health professionals who participated in the survey were examined, the depression score averages did not cause a significant difference. This result may have resulted from the methodology of our study. In our study, a total of 4 psychoeducational videos were prepared due to the increasing workload and high tempo of healthcare professionals. These include stress and stress management, anxiety and coping styles, maintaining resilience and resilience, and depression. A single video about depression may not have been enough to decrease depression scores. However, after watching the videos, the depression scores of the health workers who participated in the survey decreased in those who used alcohol and those who had 1-3 shifts per month. This is thought to be due to the relationship between alcohol use and anxiety. Our finding is consistent with studies on alcohol use and the prevalence of anxiety. Among the anxiety disorders seen together with alcohol problems in the literature, it was reported that generalized anxiety disorder is the most common, secondary alcoholism rates are up to 20% in anxious patients, and that alcohol is a real problem in 17.3% of patients with anxiety disorders.<sup>28</sup>

The increase in depression scores in high school graduates and the increase in anxiety and depression scores only in cleaning staff can be associated with the characteristics of the participants. The education level of both cleaning staff and high school graduates is lower than the other health workers who participated in the survey. Other healthcare professionals consist of individuals with undergraduate education. Having a lower education level than other healthcare professionals, understanding the nature of anxiety and depression such as stress, stress management, effective coping with stress and problem-solving skills, and systematic cognitive distortions, monitoring oneself using the introspection method through coping skills with these, may have created a feeling of inadequacy in integrating psychology knowledge into life and gaining awareness of what has been learned, and may have had an adverse effect due to inadequacy. This may have resulted in them getting

a higher score than before watching the psychoeducational videos.

The last finding of the study is the results obtained regarding the analysis of psychological resilience scores. According to the results, when the factor scores of the health professionals who participated in the survey were examined before and after watching the psychological support videos, no significant difference was found in the psychological resilience dimension. Adapting to changing environments, identifying opportunities, adapting to constraints, responding more adaptively to the context of conditions, especially in difficult situations, showing resistance to difficulties and being more secure with resistance, a high level of resilience, defined as self-assertion, a psychological capital, which is revealed by becoming goal-oriented and goal-oriented, is a protective factor against anxiety and depression.<sup>29</sup> When evaluated in this context, it can be said that although our result on psychological resilience did not create a significant statistical difference as a result of monitoring psychological support videos, the decrease in anxiety and depression scores had a positive effect on psychological resilience. In addition, psychological resilience, which is positively affected by factors such as personal control, positive perspective, optimism, and perceived social support, can be seen in the pandemic process, in addition to the uncertainty caused by the nature of the virus and the increasing workload of healthcare professionals. It can be understood that despite receiving psychological support, it has not increased due to the fact that they could not develop personal control over the event due to their introspective work, could not maintain their positive perspective and optimism due to illness and death, and remained away from the existing social support networks.

Although this research was conducted in the field of clinical psychology, it is also related to social psychology. In social psychology, especially in times of crisis, seeing others as a source of information that will guide our behavior, believing that others interpret an uncertain situation more accurately than we do, and as a result, developing a course of action in accordance with the behavior of others is defined as an informative social effect.<sup>30</sup> The pandemic process can also be considered as a crisis situation, especially at the beginning and at the time of the study. The lack of information about the nature of the virus, the incomplete and constantly changing information about the diagnosis and treatment process, and the contradictory information given by health politicians and scientists in our country and in the world are a problem for people. It has caused panic and crisis. We need informative social influence more in uncertain and crisis situations. In these periods, we believe that experts have more knowledge than us, and we turn to them to direct our behavior. In this context, the pandemic was an uncertain situation, especially it had a crisis effect at the beginning and the first periods that followed. This



crisis caused stress and anxiety. In order to eliminate and/or manage the psychological effects (such as stress, anxiety, helplessness, insomnia, decrease in problem-solving skills) emerging here, experts (expert clinical psychologists who prepare and present the psychoeducational videos for this study) inform the participants about how they can manage their psychological picture in which they were found. This situation provided the opportunity for the participants to manage their behavior in accordance with the psychoeducational information given. This can be interpreted as a decrease in the anxiety and partly depression scores of the participants participating in the survey.

Human health is a biopsychosocial whole. Social traumas such as epidemics, disasters, and wars affect not only human biological health but also psychological and social health. The inclusion of clinical psychologists in the health policies created in such cases is important for the psychosocial integrity of the person.

**Ethics Committee Approval:** Ethical committee approval was received from the Ethics Committee of Sakarya University (Approval No: E-61923333-050.99-3500).

**Informed Consent:** Informed consent was obtained from the participants before starting the study.

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