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COMPARISON OF HEALTH PERSONNEL BURNOUT LEVELS ACCORDING TO THEIR WORKING STATUS IN COVID-19 PANDEMIC CLINIC AND OTHER CLINICS*		
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ABSTRACT

The purpose of this study is to examine the degrees of burnout experienced by medical professionals who work at COVID-19 pandemic clinics against other clinics. The research was conducted on 160 healthcare professionals working in public hospitals in Izmir province. Stratified random sampling was applied in the study. As a data collection tool in the study, a personal information form containing demographic information was directed to the healthcare professionals. Maslak Burnout Inventory (MBI) was used to evaluate burnout levels. The software SPSS 28.0 was utilized to analyze the data. The normality of the acquired data was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests, and the variables were compared using the Independent T-Test. There is a significant difference between female (26.86 ± 3.32) and male (28.45 ± 3.06) healthcare professionals ($p < 0.05$) in the Personal Success sub-dimension of the ITS of healthcare professionals who are not in the pandemic department. There is a significant difference between healthcare professionals who find the profession they are involved in suitable for themselves and those who do not find the profession suitable for themselves in the ITS Depersonalization sub-dimension of healthcare professionals who are not in the pandemic department ($p < 0.05$). However, there is no significant difference between the healthcare professionals in the pandemic department who find the profession they are involved in suitable and not suitable for themselves in the ITS Depersonalization sub-dimension ($p > 0.05$). It was found that nurses (31.3 ± 2.80) experienced the highest level of burnout among healthcare professionals both in the pandemic department and not in the pandemic department. It is recommended to carry out more studies to reduce the burnout averages of health workers.

Keywords: Covid-19, Pandemic, Healthcare Personnel, Burnout.

1. INTRODUCTION

In a certain region or society, the occurrence of a health-related behavior or disease above normal is defined as an epidemic (Martin & Martin-Granel, 2006). Epidemic diseases have been given different names according to their organismal structures and characteristics. Epidemic diseases, which are classified under three different names as endemic, epidemic and pandemic, are also grouped in this way around the world (Deniz, 2022).

Endemic is often confused with epidemic in the literature. However, endemic means the continuous continuation of a disease in a population group or geographical region. In other words, endemic means the continuous rapid existence of a disease without ending (Varga, 2014).

Epidemic is a concept that is an epidemic disease seen in a region or society and affects a high percentage of the population. Pandemic is the name given to epidemic diseases that have a widespread effect in

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many countries or continents in the world. Many infectious agents and transmission routes can cause an epidemic. Theoretically, pandemic: In ancient Greek, pan = all, demos = people. In fact, pandemic is called the name of epidemic diseases that affect almost all people (Türkiye Bilimler Akademisi [TÜBA], 2020). To summarize all three concepts (endemic, epidemic, pandemic): endemic is a common epidemic disease in a population; epidemic is an epidemic disease that takes the population in question out of its habit; pandemic is an epidemic disease that has an impact on the world and affects the largest mass (Merson et al., 2011).

2. LITERATURE REVIEW

The occurrence of a disease in many living beings as a result of the indirect or direct transmission and impact of an infection on a population is called an epidemic disease (Parıldar, 2020). Public health experts and biologists make three different groups of epidemic diseases according to their spreading capacity/impact level. The first of these types is endemic. Endemic is defined as epidemic diseases that are seen only in people living in a community or region. If the endemic cannot be controlled/is not taken under control and affects a larger population, it is called an epidemic instead of an endemic. The type of epidemic diseases that affect the largest population is pandemic epidemic diseases. In order for a disease to be defined as a pandemic, it must include a large number of deaths, many contagious features and a very high prevalence (Gögebakan, 2021; Parıldar, 2020). When we look at the epidemics that have occurred from past to present, it is known that many different and infectious diseases such as plague, ebola, cholera, smallpox, influenza, tuberculosis, syphilis, malaria, AIDS and COVID-19 have reached pandemic dimensions (Parıldar, 2020).

Healthcare workers face many occupational risks today. We can say that the most important occupational risk factors are pandemic infections and contagious infections. Pandemic infections and contagious infections that healthcare workers will acquire at their workplaces pose a risk not only to their own health but also to the health of their family members, other patients, other healthcare workers and the public. In addition, they can transmit diseases they acquire from the public to their patients and other healthcare workers (Kartal, 2008). In addition, especially due to the COVID-19 pandemic, it is likely that healthcare workers will be more likely to contract an infection than the general public - even a life-threatening risk, intense pressure and stress due to working conditions, and an increase in the risk of burnout (Duran, 2022). For this reason, healthcare workers are more likely to encounter sick people and to contract pandemic diseases than other professional groups (Dikmen, 2010). So much so that the first case of influenza epidemic in Türkiye was detected in May 2009, and the first death was reported to be a healthcare worker (Ministry of Health of Türkiye, 2019). In addition to the deadly effects of pandemics for healthcare workers, they can also have negative effects on many elements of working life. Burnout is one of the areas.

Burnout, a concept that almost everyone who works in today's world is familiar with, means "failing, being exhausted or powerless as a result of high effort use" (Aba, 2022; Zeynalı, 2021). Burnout was first used in the 1970s in the USA to express the work depression experienced by people working in customer relations. However, this widespread usage, which also found its place in Greene's novel "A Burnt-Out Case" published in 1961, which tells the story of an architect who has an internal breakdown and is disappointed, quitting his job and escaping to the African forests, was expressed as "a great weariness and the extinction of a person's commitment to his job and idealism" (Göçmen, 2021). In fact, in his study on burnout, Jones stated that burnout is caused by psychological stress on individuals, but in fact; he emphasized that the stress arising from the relationship between the people providing service and the customers receiving the service affects burnout more. At the same time, he stated that the concept of burnout should be considered as a concept that includes changes in the professional process beyond individual and physical fatigue (Barutçu & Serinkan, 2008).

3. METHOD AND MATERIAL

3.1. Purpose of The Study

The main purpose of the study is to determine burnout levels of healthcare professionals, and to reveal whether the burnout levels of healthcare professionals differ depending on whether they work in a COVID-19 clinic.

3.2. Universe and Sample

The study's participants are medical professionals employed at hospitals located in the province of Izmir. A total of 160 medical experts employed by the province of Izmir's state hospitals makes up the sample group, 80 in pandemic clinics and 80 in other clinics, using the stratified sampling method.

3.3. Data Collection Tools

The “Maslach Burnout Inventory” was a tool employed in the study to gather data to investigate how healthcare professionals working in COVID-19 pandemic clinics and other clinics felt during the pandemic process, their opinions about their mood while working, and whether they were physically and biologically healthy while working. The scale developed by Maslach and Jackson (1981), which was translated into Turkish by Ergin (1992), has five-point answer options as “1 never” and “5 always” (Durşen, 2016). The scale, which consists of a total of 22 statements, is divided into sub-dimensions as emotional exhaustion (1-2-3-6-8-13-14-16-20), depersonalization (5-10-11-15-22) and low personal accomplishment (4-7-9-12-17-18-19-21). In the emotional exhaustion sub-dimension, low burnout is between 9-22.49, medium burnout is between 22.5-31.49, and high burnout is between 31.5-45 points. In the depersonalization sub-dimension, low burnout is between 5-12.49, medium burnout is between 12.5-17.49, and high burnout is between 17.5-25 points. Low personal accomplishment is between 8-19.99 for low burnout, 20-27.99 for medium burnout, and 28-40 points for high burnout. The Personal Accomplishment questions from the sub-dimensions includes reverse scoring. High mean scores are an indicator of burnout (Şıklar & Tunalı, 2012). The validity and reliability studies of this scale, developed by Ergin (1992) and Çam (1992), have been conducted. Two different methods were used for reliability analysis. First, The Cronbach's Alpha coefficients were used to assess the scale's internal consistency. The alpha coefficient for the emotional exhaustion sub-dimension was 0.83, for the depersonalization sub-dimension 0.65 and for the personal accomplishment sub-dimension 0.72. the scale's reliability was also investigated with the test-retest method. According to the retest results conducted 2-4 weeks later, the reliability coefficient of the emotional exhaustion sub-dimension was 0.83, the reliability coefficient of the depersonalization sub-dimension was 0.72 and the reliability coefficient of the personal accomplishment sub-dimension was 0.67. These results show that the scale can be repeated over time. The construct validity of the scale was examined with factor analysis, and it was found that the Turkish adaptation was completely consistent with the original version. This result shows that the scale is suitable for the language and culture used and measures the desired feature. A personal information form was administered to the participants, including demographic data: gender, age, marital status, having children, educational attainment, total number of hours worked in the profession, and working systems during the pandemic.

3.4. Data Analysis

The data analysis was done using the SPSS 28.0 program. The normality of the acquired data was assessed using the skewness-heading values, Shapiro Wilk test ($p>0.05$), and Kolmogorov-Smirnov ($p>0.05$) tests. The acquired values indicated that the data had a normal distribution, and the variables were compared using the independent groups t test. For the comparison of all the variables, 0.05 was chosen as the significant threshold.

4. FINDINGS

This section includes the findings of the research. Table 1 shows the frequency and percentage distributions of the health workers participating in the research regarding their gender, age, marital status, having children and educational status.

Table 1. Frequency and Percentage Distributions of Socio-demographic Characteristics of the Participants

Variables	Subgroups	f	%
Gender	Female	89	55.6
	Male	71	44.4
Age	Ages 18-24	32	20.0
	Ages 25-34	34	21.3
	Ages 35-44	53	33.1
	Ages 45 and over	41	25.6
Marial Status	Married	104	65.0
	Single	56	35.0
Status of Having Children	Yes	93	58.1
	No	67	41.9
Education	High School	6	3.8
	Associate's degree	18	11.3
	Bachelor's degree	129	80.6
	Postgraduate	7	4.4

Table 1 shows the frequency and percentage distributions of the healthcare professionals participating in the study regarding gender, age, marital status, having children and educational status. According to the information in Table 1; 55.6% (89 people) of the participants in the study were female, while 44.4% (71 people) were male healthcare professionals. According to the age variable, 20.0% (32 people) were between the ages of 18-24, 21.3% (34 people) were between the ages of 25-34, 33.1% (53 people) were between the ages of 35-44, and 25.6% (41 people) were healthcare professionals who were 45 years of age and over. In the frequency and percentage distributions regarding the marital status of the participants, it was determined that 65.0% (104 people) were married and 35.0% (93 people) were single.

Table 2 shows the frequency and percentage distributions of the healthcare professionals participating in the study regarding their profession, total working time in the profession, average weekly working time, and working system during the pandemic.

Table 2. Frequency and Percentage Distributions of Occupational Information of Healthcare professionals

Variables	Subgroups	f	%
Occupation	Nurse	89	55.6
	Physician	26	16.3
	Other	45	28.1
Total Working Time in the Profession	Less than 5 Years	32	20.0
	Between 6-10 Years	39	24.4
	Between 11-19 Years	54	33.8
	20 Years and over	35	21.9
Average Weekly Working Hours	Less than 40 Hours	18	11.3
	Between 41-72 Hours	96	60.0
	73 Hours and over	46	28.8
Working System During the Pandemic	Shift	55	34.4
	On-Call\Rotating	96	60.0
	Administrative Leave	9	5.6

According to the information in Table 2; 55.6% (89 people) of the participants in the study were nurses, 16.3% (26 people) were doctors, and 28.1% (45 people) were other health professionals (laboratorians,

midwives, etc.). According to the total length of service in the profession, 20.0% (32 people) had worked for less than 5 years, 24.4% (39 people) had worked for 6-10 years, 33.8% (54 people) had worked for 11-19 years, and 21.9% (35 people) had worked for 20 years or more. According to the average weekly working hours, 11.3% (18 people) of health professionals worked for 40 hours or less, 60.0% (96 people) worked for 41-72 hours, and 28.8% (46 people) worked for 73 hours or more. In the frequency and percentage distribution of the participants regarding their working system during the pandemic, it is seen that 34.4% (55 people) worked overtime, 60.0% (96 people) worked on shift/rotation, and 5.6% (9 people) worked on administrative leave.

Table 3. Frequency and Percentage Distributions Regarding Working Conditions of Healthcare Workers

Variables	Subgroups	f	%
Finding the Profession Suitable for Him/Her	Suitable	34	21,3
	Not Suitable	126	78,8
Choosing the Same Profession Again	Yes	50	31,3
	No	110	68,8
Status of Receiving In-Hospital Training Regarding the COVID-19 Pandemic	Yes	114	71,3
	No	46	28,8
Contact with a COVID-19 Suspected/ Diagnosed Patient Due to Occupation	Yes	130	81,3
	No	30	18,8
Status of Receiving Psychological Support During the COVID-19 Pandemic	Yes	34	21,3
	No, I don't want	108	67,5
	I want to receive	18	11,3

Table 3 shows the frequency and percentage distributions of the healthcare professionals participating in the study regarding their work conditions, finding the profession suitable for them, choosing the same profession again, receiving in-hospital training regarding the COVID-19 pandemic, coming into contact with a COVID-19 suspected/diagnosed patient due to their profession, and receiving psychological support during the COVID-19 pandemic.

According to Table 3, 21.3% (34 people) of the participants found the profession suitable for them, while 78.8% did not find the profession suitable for them. 31.3% of healthcare professionals (50 people) stated that they would choose the same profession again, while 68.8% (110 people) answered no to the situation of choosing the same profession again. Regarding the status of receiving in-hospital training regarding the COVID-19 pandemic, it was seen that 71.3% (114 people) received training on the relevant subject, while 28.8% (46 people) did not receive in-hospital training regarding the COVID-19 pandemic. It was stated that 81.3% (130 people) of healthcare professionals had contact with suspected/diagnosed COVID-19 patients due to their profession, while 18.8% (30 people) did not have contact with suspected/diagnosed COVID-19 patients due to their profession. In terms of receiving psychological support during the COVID-19 pandemic, 21.3% (34 people) received psychological support, 67.5% (108 people) did not want support, and 11.3% (18 people) wanted to receive psychological support.

Table 4. MBI Subdimensions' Scores of Healthcare Workers not in the Pandemic Department

Dimensions	N	' \bar{X} '±SS	Skewness	Kurtosis
Emotional Exhaustion	80	30.3±2.38	-0.841	0.726
Depersonalization		15.3±3.09	0.685	-0.657
Personal Accomplishment		27.7±3.25	-0.984	0.682

Table 4 shows the MBI subgroup scores of healthcare workers who were not in the pandemic department. When the table in question is examined, it is seen that the participants' emotional exhaustion subgroup mean score is 30.3±2.38, the depersonalization subgroup mean score is 15.3±3.09, and the personal accomplishment subgroup mean score is 27.7±3.25. When the MBI sub-dimensions of healthcare workers who were not in the pandemic department are examined, it is understood that the data show a normal distribution since the data are between ±1.5 values (Tabachnick and Fidell, 2007).

Table 5. MBI Subdimensions' Scores of Healthcare Workers in the Pandemic Department

Dimensions	N	' \bar{X} '±SS	Skewness	Kurtosis
Emotional Exhaustion	80	31.0±3.28	-0.941	-0.866
Depersonalization		16.2±2.47	0.881	-0.926
Personal Accomplishment		27.5±2.84	-0.689	0.488

Table 5 shows the MBI subgroup scores of healthcare workers in the Pandemic section. When the table in question is examined, it is seen that the participants' emotional exhaustion subgroup mean score is 31.0±3.28, the depersonalization subgroup mean score is 16.2±2.47, and the personal accomplishment subgroup mean score is 27.5±2.84.

Table 6. MBI Subgroup Distribution of Healthcare Workers not in the Pandemic Department

Dimensions	Subgroups	N	%
Emotional Exhaustion	Low	9	11.3
	Medium	27	33.8
	High	44	55.0
Depersonalization	Low	25	31.3
	Medium	45	56.3
	High	10	12.5
Personal Accomplishment	Low	8	10.0
	Medium	49	61.3
	High	23	28.8

Table 6 shows the MBI subgroup distributions of healthcare workers who were not in the Pandemic section. When the table in question was examined; it was determined that 9 (11.3%) had low, 27 (33.8%) had medium, and 44 (55.0%) had high levels of burnout in emotional exhaustion. Again, in the depersonalization subgroup distribution, 25 (31.3%) had low, 45 (56.3%) had medium, and 10 (12.5%) had high levels of depersonalization. In the personal accomplishment subgroup distribution, 8 (10.0%) had low, 49 (61.3%) had medium, and 23 (28.8%) had high levels.

Table 7. MBI Subgroup Distribution of Healthcare Workers in the Pandemic Department

Dimensions	Subgroups	N	%
Emotional Exhaustion	Low	-	-
	Medium	19	23.8
	High	61	76.3
Depersonalization	Low	19	23.8
	Medium	61	76.3
	High	-	-
Personal Accomplishment	Low	-	-
	Medium	62	77.5
	High	18	22.5

Table 7 shows the MBI subgroup distributions of healthcare workers in the Pandemic department. When the table in question is examined; it is determined that 19 (23.8%) experienced moderate and 61 (76.3%) experienced high levels of burnout in emotional exhaustion. Again, in the depersonalization subgroup distribution, 19 (23.8%) experienced low and 61 (76.3%) experienced moderate levels of depersonalization. In the personal accomplishment subgroup distribution, 62 (77.5%) experienced moderate and 18 (22.5%) experienced high levels.

Independent T-Test was conducted to compare healthcare workers in the pandemic section and those who were not in the pandemic section according to the MBI sub-dimensions. Table 8 shows the comparison of healthcare workers in the pandemic section and those who were not in the pandemic section according to the MBI sub-dimensions. According to the table above, there was no significant difference between the Emotional, Desensitization and Personal Accomplishment averages of healthcare workers in the pandemic section and those who were not in the pandemic section ($p>0.05$). When the means of the sub-dimensions were compared, it was seen that the average of healthcare workers in the pandemic section in the emotional sub-dimension (31.07 ± 3.28) was higher than the average of healthcare workers not in the pandemic section (30.30 ± 2.38). In the desensitization sub-dimension, it was determined that the average of healthcare workers in the pandemic section (16.20 ± 2.47) was higher than the average of healthcare workers not in the pandemic section (15.37 ± 3.09).

Table 8. Comparison of Healthcare Professionals Working and not Working in the Pandemic Department according to MBI Sub-dimensions

Dimensions	Subgroups	N	$\bar{X}\pm Ss$	t	p
Emotional Exhaustion	Not in the Pandemic Department	80	$30,30\pm 2,38$	-1,707	0,090
	In the Pandemic Department	80	$31,07\pm 3,28$		
Depersonalization	Not in the Pandemic Department	80	$15,37\pm 3,09$	-1,860	0,065
	In the Pandemic Department	80	$16,20\pm 2,47$		
Personal Accomplishment	Not in the Pandemic Department	80	$27,73\pm 3,25$	0,413	0,680
	In the Pandemic Department	80	$27,53\pm 2,84$		

5. DISCUSSIONS

In a study conducted by Dinibütün (2020), it was determined that doctors who did not take an active role in the fight against COVID-19 were more exhausted than those who took an active role in the personal accomplishment sub-dimension, and there was no significant relationship in the emotional exhaustion and insensitivity sub-dimension. Wu et al. (2020) reported in a study conducted in China that healthcare professionals on the front lines of the fight against the pandemic experienced less burnout than those working in regular services. Beyoğlu (2022) stated that healthcare professionals who took an

active role in the fight against COVID-19 experienced more burnout than those who did not take an active role in the desensitization sub-dimension, while no significant difference was found in the emotional exhaustion and personal accomplishment sub-dimension. In this study, when healthcare professionals who were and were not in the pandemic department were compared according to the MBI Sub-Dimensions, no significant difference was found between the Emotional, Insensitivity and Personal Accomplishment averages of healthcare professionals who were and were not in the pandemic department ($p>0.05$). When the means of the sub-dimensions are compared, it is seen that the mean of healthcare workers in the pandemic section in the emotional sub-dimension (31.07 ± 3.28) is higher than the mean of healthcare workers not in the pandemic section (30.30 ± 2.38). In the desensitization sub-dimension, it was found that the mean of healthcare workers in the pandemic section (16.20 ± 2.47) is higher than the mean of healthcare workers not in the pandemic section (15.37 ± 3.09). In the personal accomplishment sub-dimension, the mean of healthcare workers in the pandemic section (27.53 ± 2.84) and not in the pandemic section (27.73 ± 3.25) was found to be higher than the burnout score of healthcare workers not in the pandemic section at the 0.2 value.

6. CONCLUSIONS AND RECOMMENDATIONS

Health is a situation that affects every population of a society. In fact, it can be said that any health problem that may arise can have a negative effect on the entire society. Healthcare workers (nurses, midwives, etc.) in particular are directly/indirectly affected by epidemics, whether they are endemic or pandemic. In fact, healthcare workers may feel burnout in the face of this situation. Therefore, it is important to investigate the burnout status of healthcare workers considering the COVID-19 pandemic outbreak today. In this study, a comparison of the burnout levels of healthcare workers working in COVID-19 pandemic clinics and other clinics was made. When the mean scores of healthcare workers in and out of the pandemic department were compared, it was determined that the mean score of healthcare workers in the pandemic department (31.07 ± 3.28) was higher than the mean score of healthcare workers not in the pandemic department (30.30 ± 2.38) in the emotional sub-dimension. In the desensitization sub-dimension, it was determined that the average of healthcare workers in the pandemic section (16.20 ± 2.47) was higher than the average of healthcare workers not in the pandemic section (15.37 ± 3.09). In the personal achievement sub-dimension, it can be stated that the averages of healthcare workers in the pandemic section (27.53 ± 2.84) and not in the pandemic section (27.73 ± 3.25) were higher. The fact that healthcare workers are at the forefront of both intervention and combat in epidemic diseases such as COVID-19 causes physiological and psychological wear and tear/exhaustion. Therefore, it is recommended that more studies be conducted to ensure that Türkiye's healthcare workers are in a state of complete well-being/preservation.

This study has a few limitations. First, since the study was conducted on the health personnel in İzmir city, the results can not be generalized to Türkiye. Second, it can be stated that the sample of the study is small. Therefore, more solid evidence can be obtained in studies conducted with a larger sample.

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