



**Erratum to:**

**The Burnout Levels of Caregivers and Caregiver Burden of the Patients with Declined Active Participation in the Community Mental Health Center During the COVID-19 Pandemic**

**Düzeltme:**

**COVID-19 Pandemisinde Hastaların Toplum Ruh Sağlığı Merkezi'ne Aktif Katılımının Azalmasıyla Bakım Verenlerde Artan Tükenmişlik ve Bakıcı Yükü Düzeyleri**

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The author forwarded the following statement to the Editorial Board of the Journal of Contemporary Medicine and requested a correction to be published. "I had an article published in your journal. There is an error in the 'MATERIAL AND METHOD' section of this article that I later noticed. I would like to correct this error."

Wrong Sentence:

"Both interviews were conducted face-to-face by inviting caregivers to the CMHC."

Corrected Sentence:

"The second interview was held face-to-face by inviting the caregivers to the CMHC. The data in the first interview were obtained from a previous interview archive made with caregivers at CMHC, retrospectively, before the pandemic."

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# Increased Burnout and Caregiver Burden Levels in Caregivers with Declined Active Participation of Patients in the Community Mental Health Center During the COVID-19 Pandemic

## COVID-19 Pandemisinde Hastaların Toplum Ruh Sağlığı Merkezi'ne Aktif Katılımının Azalmasıyla Bakım Verenlerde Artan Tükenmişlik ve Bakıcı Yükü Düzeyleri

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### Abstract

**Aim:** This study aimed to compare the burnout and caregiver burden in caregivers during COVID-19 due to the decrease in patient participation in the Community Mental Health Center (CMHC) and the inability to accept patients for a while before the COVID-19 pandemic.

**Material and Method:** Caregivers of 47 patients registered to CMHC were included in this study. The first interview for this study was held in January 2020, before the start of the COVID-19 pandemic in Turkey. The second interview was held in June 2021, after the start of the COVID -19 pandemic and thus lockdown and restrictions. Sociodemographic data form, Maslach Burnout Inventory (MBI), and Zarit Caregiver Burden Scale (ZCBS) were applied to caregivers.

**Results:** The findings obtained in the second interview showed that MBI ( $p<0.001$ ) and ZCBS ( $p<0.001$ ) total scores were significantly higher. And in the second interview, the increase in burnout level was higher in the participants with low education level and those who did not work ( $p<0.05$ ). Also, the increase in burnout level and caregiver burden was higher in those with low income, caregivers for a longer time, those with low drug compliance, and those with a history of COVID-19 ( $p<0.05$ ).

**Conclusion:** During the COVID-19 pandemic, the increasing burnout and caregiver burden of the caregivers of patients who could not actively participate in TRSM activities due to the measures taken for social isolation supported the importance of TRSM services.

**Keywords:** Caregiver burnout, community, COVID-19 pandemic, mental health

### Öz

**Amaç:** Bu çalışmada; COVID-19 pandemisinde, Toplum Ruh Sağlığı Merkezi (TRSM)'ne hasta katılımının azalması ve bir süre hasta kabul edilememesi nedeniyle, bakım verenlerde oluşan tükenmişlik ve bakıcı yükünün, COVID-19 pandemisi öncesiyle kıyaslanması amaçlandı.

**Gereç ve Yöntem:** TRSM'ye kayıtlı 47 hastanın bakım vereni çalışmaya alındı. Bu çalışmadaki ilk görüşme, Türkiye'de COVID-19 pandemisinin başlamasından önce Ocak 2020'de yapıldı. İkinci görüşme ise COVID-19 pandemisi başladıktan sonra, kapanmalar ve kısıtlamalardan sonra, 2021'in haziran ayında yapıldı. Bakım verenlere sosyodemografik veri formu, Maslach Tükenmişlik Envanteri (MTE), Zarit Bakıcı Yük Ölçeği (ZBYÖ) uygulandı.

**Bulgular:** İkinci görüşmede MTE ( $p<0,001$ ) ve ZBYÖ ( $p<0,001$ ) toplam puanları anlamlı olarak daha yüksek saptandı. Ve ikinci görüşmede katılımcılardan eğitim düzeyi düşük olanlarda ve çalışmayanlarda tükenmişlik düzeyindeki artış daha fazlaydı ( $p<0,05$ ). Ayrıca, ikinci görüşmede gelir düzeyi düşük olanlarda, daha uzun süre bakım verenlerde, hastanın ilaç uyumu düşük olanlarda, COVID-19 geçirme öyküsü olanlarda tükenmişlik düzeyindeki ve bakıcı yükündeki artış daha fazlaydı ( $p<0,05$ ).

**Sonuç:** COVID-19 pandemisi döneminde sosyal izolasyon amaçlı alınan tedbirler nedeniyle, TRSM faaliyetlerine aktif katılım gösteremeyen hastaların bakım verenlerinin artan tükenmişlik ve bakıcı yükleri, TRSM hizmetlerinin önemini desteklemiştir.

**Anahtar Kelimeler:** Bakım veren tükenmişliği, COVID-19 pandemisi, ruh sağlığı, toplum



## INTRODUCTION

The concept of community mental health is related to the psychiatric condition, treatment and care of the individual and the environment with which he or she is in communication.<sup>[1]</sup> Community mental health centers (CMHCs) are the centers where the patient is followed up and treated, and where the individual communicates with both himself or herself and his or her family. These centers also aim to prevent hospitalizations. CMHCs offer activities and tasks for the patients to gain functionality. These types of centers are also the centers where individual and group therapies are provided in addition to drug treatments.<sup>[2]</sup> Individuals with diagnoses such as bipolar disorder, schizophrenia and other psychoses are registered in these centers. The registered patients are invited to CMHCs, and interviews are conducted. Home visits are made for the patients who do not participate in CMHC activities. Personal care plan files are available for all patients. These files are shaped according to the needs of that patient and the necessary interventions are made. Treatment is followed by a psychiatrist. There are many activities such as painting, sports, handicrafts, and music for patients who visit CMHCs.<sup>[3]</sup> In addition to many services provided to the patients, regular family interviews and family trainings are held. Within the scope of the services provided to the families, it is aimed to facilitate and support the lives of the caregivers. The person who provides primary care by meeting the needs of a patient with a severe chronic disease is defined as a caregiver. The social, socioeconomic, physical and psychological difficulties experienced by the caregiver as a result of this responsibility are called the "caregiver burden".<sup>[4]</sup> Caregivers of people with severe mental disorders are exposed to a significant burden as a result of their caregiving role.<sup>[5]</sup> Mental illnesses, especially schizophrenia and bipolar disorder, are among the most difficult and burdensome for caregivers. Burnout is characterized by decreased personal achievement, depersonalization, and emotional exhaustion.<sup>[6]</sup> Caring for a person with mental illness affects caregivers financially, physically, and emotionally and creates some restrictions on their routines.<sup>[7]</sup>

The COVID-19 virus emerged in 2019, affecting the whole world, and this epidemic has been accepted as a pandemic. Due to the fact that social isolation is one of the most important measures to combat this pandemic, the living conditions, habits, social aspects, and most importantly, the psychological status of individuals have been significantly affected.<sup>[8]</sup> In order to control and eliminate COVID-19, many measures, especially "lockdowns", were taken in many countries during the pandemic.<sup>[9]</sup> Within the scope of the measures taken, measures had to be implemented in CMHCs like many other institutions. Considering that patients participating in CMHC services could not follow important rules such as social distance and mask use, patients had to stay away from CMHC activities in line with the mandatory rules.

Patients could not be admitted to CMHC for a while due to the COVID-19 pandemic and then limited patient admission was allowed. In this study, it was aimed to compare the burnout and caregiver burden levels in caregivers during the COVID-19 pandemic to those before the COVID-19 pandemic. This study will contribute to the literature by seeing the importance of caregivers' burden and burnout during pandemic processes.

## MATERIAL AND METHOD

### Sample

There are 543 patients registered in Elazığ CMHC. Approximately 24 of these patients come to CMHC regularly at least once a week, and approximately 30 of them benefit from CMHC activities almost every day. These 54 patients were considered as regular participants in CMHC. After the start of the COVID-19 pandemic, the number of patients participating in CMHC decreased. And from January 2021 to May 2021, CMHC did not provide face-to-face services. During this process, online interviews were conducted. After reopening in May, a limited number of approximately 10 patients per day were admitted to the CMHC.

### Intervention

Inclusion criteria for the study were determined as caring for patients who were registered in CMHC and for patients who regularly participated in CMHC activities for at least 6 months before the outbreak of the pandemic, and for patients who were diagnosed with bipolar disorder, schizophrenia or other psychoses according to DSM-5 diagnostic criteria. On the other hand, exclusion criteria from the study were the presence of a psychiatric disease, the presence of cognitive and neurological disease at a level that hinder the participants from perceiving the scales. The participants did not have a history of any psychiatric illness, and the history taken from the participants was taken into account when excluding psychiatric illnesses. Since the presence of a psychiatric disease may cause mental problems such as burnout, those with psychiatric diseases were excluded from the study so that this would not affect the results of the study. For this study, the researcher tried to interview the caregivers of 54 patients who attended CMHC more regularly. Caregivers of 2 patients could not be included in the study because they did not want to participate in the interviews. 2 patients did not have a caregiver with whom they lived together. The caregivers of 3 patients had a history of psychiatric illness. The caregivers of the remaining 47 patients were included in the study. None of the 47 caregivers interviewed met a psychiatric diagnosis at the time of the interview and had no previous history of psychiatric illness. Since none of these caregivers had exclusion criteria, they were all included in the study. The first interview (I1) in this study was held in January 2020, before the onset of the COVID-19 pandemic in Turkey. The second meeting (I2) was held in June 2021, later in the pandemic, after the start of the COVID-19 and the lockdowns and restrictions. The second interview was held face-to-face by inviting the caregivers to the CMHC. The data in the first interview were obtained from

a previous interview archive made with caregivers at CMHC, retrospectively, before the pandemic. Sociodemographic Data Form for the Caregivers, Maslach Burnout Inventory and Zarit Caregiver Burden Scale were applied to all caregivers.

Written informed consent form was obtained from all participants by giving information about the study. The study was conducted based on ethical principles and in accordance with the principles of the Declaration of Helsinki. This study was approved by the ethics committee of Firat University (Date: 27.05.2021, No: 2021/07-30).

### Data Collection Tools

#### Sociodemographic Data Form for the Caregivers

The form was prepared by the researcher. There are some data about age, gender, education level, background, family history, COVID-19 history, household income, the duration of caregiving period, the degree of affinity and the patient he/she cares for.

#### Maslach Burnout Inventory (MBI)

This scale was developed by Maslach and Jackson in 1981 and consists of 22 items. There are depersonalization, emotional exhaustion, and personal accomplishment subscales in the inventory. As the score obtained from the "personal accomplishment" subscale decreases, the level of burnout increases. In contrast, as the score received from the subscales "emotional exhaustion" and "depersonalization" increases, the level of burnout increases. The validity and reliability study of the inventory was conducted by Ergin in 1992.<sup>[10,11]</sup>

#### Zarit Caregiver Burden Scale (ZCBS)

This scale is employed to evaluate the burden level of the caregivers. It was developed by Zarit et al. in 1980. The validity and reliability study of the scale was performed by Özlü et al. in 2009 by being translated into Turkish. Scoring can be made between 19-95 points. As the scores increase, the level of the burden experienced increases. There are subscales of economic burden, dependence, irritability and restrictedness, psychological tension and impaired private life, and impaired social relations.<sup>[12,13]</sup>

#### Statistical Analysis of the Data

The data obtained in the research were evaluated through the SPSS 22.0 statistical program. Whether the data showed normal distribution or not was analyzed with skewness and kurtosis. It was determined that the variables showed normal distribution. Frequency and percentage analyses were used to determine the descriptive characteristics of the caregivers participating in the research. On the other hand, mean and standard deviation statistics were used in the analysis of the scale. The change in the levels of burnout and burden of the caregivers before and after the COVID-19 pandemic was analyzed through dependent groups t-test. Independent Groups T-test, Anova test and post hoc analyzes were used to examine the changes in the scale levels according to the sociodemographic characteristics of the patients. Significance level was accepted as  $p < 0.05$ .

## RESULTS

Participants consisted of 21 men and 26 women. The mean age was 50,021. The distribution of the participants' sociodemographic data is tabulated in **Table 1**.

**Table 1. Distribution of Sociodemographic Data**

Groups	Frequency (n)	Percent (%)
Gender		
Male	21	44,7
Female	26	55,3
Marital Status		
Married	36	76,6
Single	8	17,0
Divorced / Widow(er)	3	6,4
Education Level		
Illiterate	8	17,0
Primary School	24	51,1
Secondary School	9	19,1
University	6	12,8
Employment Status		
Employed	20	42,6
Unemployed	27	57,4
Household Income		
<2000 TL	10	21,3
2000-5000 TL	25	53,2
5000> TL	12	25,5
Duration of Caregiving		
1-5 Years	13	27,7
5-10 Years	21	44,7
>10 Years	13	27,7
Degree of Affinity of the Patient		
Spouse	14	29,8
Child	4	8,5
Parents	18	38,3
Sibling	11	23,4
Gender of the Patient		
Male	37	78,7
Female	10	21,3
Diagnosis of the Patient		
Bipolar Affective Disorder	26	55,3
Schizophrenia and other psychoses	21	44,7
Patient's Medication Compliance (Perceived by the caregiver)		
Low	16	34,0
Moderate	17	36,2
High	14	29,8
Caregiver's COVID-19 History		
Present	21	44,7
None	26	55,3
	<b>Mean</b>	<b>SD</b>
Age	50,021	15,059
Age of the Patient	43,532	9,184

Descriptive Statistics (frequency, percentage, mean, standard deviation)

**Table 2. The Change seen in Burnout and Caregiver Burden Levels Before and After the COVID-19 Pandemic**

Measurements	I1	I2	N	t	p
	Mean±SD	Mean±SD			
MBI Total	57,000±9,952	62,149±11,073	47	-5,207	<0,001*
Emotional Exhaustion	18,936±7,088	22,277±8,769	47	-5,092	<0,001*
Depersonalization	8,213±3,647	9,000±3,665	47	-3,372	0,002*
Personal Accomplishment	29,851±6,221	30,915±5,664	47	-1,863	0,069
ZCBS Total	46,021±15,109	53,511±16,420	47	-6,418	<0,001*
Psychological Tension & Impaired Private Life	15,745±6,768	18,638±7,432	47	-5,853	<0,001*
Irritability & Restrictedness	7,553±2,757	8,915±3,113	47	-6,501	<0,001*
Impaired Social Relations	5,638±2,706	6,660±3,171	47	-4,822	<0,001*
Economic Burden	10,575±3,488	11,894±3,389	47	-5,843	<0,001*
Dependence	6,787±2,274	7,340±2,219	47	-4,436	<0,001*

Dependent Groups T-Test, \*p<0,05, MBI: Maslach Burden Inventory, ZCBS: Zarit Caregiver Burden Scale, I1: 1st Interview, I2: 2nd Interview

The increase in the interview 2 (I2) value ( $\bar{x}$ =62.149) compared to the interview 1 (I1) value ( $\bar{x}$ =57,000) of the MBI total mean score was found to be significant ( $t$ =-5.207;  $p$ <0.001) (**Table 2**). The variation of the subscales of MBI between I1 and I2 is shown in **Table 2**. The increase in the I2 value ( $\bar{x}$ =53.511) compared to the I1 value ( $\bar{x}$ =46,021) of the ZCBS total mean score was significant ( $t$ =-6.418;  $p$ <0.001) (**Table 2**). The variation of the subscales of ZCBS between I1 and I2 is shown in **Table 2**.

The mean change in the total scores of MBI of the caregivers was found to be 5.149±6,779 (Min=-9; Max=24), and the mean change in the total scores of ZCBS was found to be 7.489±8,000 (Min=0; Max=40) (**Table 3**).

**Table 3. Descriptive Statistics of Burnout and Caregiver Burden Total Scores Between Before and After the COVID-19 Pandemic**

	N	Mean	SD	Min	Max
MBI Change	47	5,149	6,779	-9,000	24,000
ZCBS Change	47	7,489	8,000	0,000	40,000

Central Distribution Measurements, MBI: Maslach Burden Inventory, ZCBS: Zarit Caregiver Burden Scale

The change in the MBI total mean score of the caregivers differs significantly according to the education level, employment status, income of the caregiver, duration of caregiving, patients' medication compliance, and the caregiver's COVID-19 history ( $p$ <0.001,  $p$ <0.001,  $p$ <0.001,  $p$ <0.001,  $p$ <0.001,  $p$ <0.001, respectively) ( $p$ <0,05) (**Table 4**). The change in the ZCBS total mean score of the caregivers differs significantly according to the income of the caregiver, the duration of caregiving, the patient's medication compliance, and the caregiver's COVID-19 history ( $p$ =0.001,  $p$ =0.002,  $p$ <0.001,  $p$ =0.003, respectively) ( $p$ <0,05) (**Table 4**).

## DISCUSSION

In this study, it was seen that the burnout and burden levels of caregivers increased after the COVID-19 pandemic and this increase was found to be associated with some sociodemographic data.

With CMHC services, it is aimed to facilitate follow-up and treatment of the patients and to decrease the difficult process and the levels of burden caused by the disease.<sup>[14]</sup> Severe mental illnesses cause disability and loss of functionality. On the other hand, being a caregiver for these patients is very difficult, requires time, and extensive effort, and is an undesirable and unpredictable situation.<sup>[15]</sup>

In this study, caregivers had higher burnout and higher total caregiver burden levels in I2 than total levels of burnout and caregiver burden observed in I1. In addition, it was seen that the levels of emotional exhaustion and depersonalization, as well as dependence, economic burden, psychological tension, irritability, and impaired social relations were higher in I2 than in I1. As mentioned earlier, CMHCs are very important for both patients and caregivers. Because, thanks to CMHC, the time that caregivers spend with patients decreases and they can find more time for themselves. Thus, they have the opportunity to spend more quality time together with the patients they care for. In a previous study, it was found that patients who participated in CMHC activities enjoyed better functionality and that the caregivers of these patients had less caregiver burden.<sup>[16]</sup> Considering the period of the COVID-19 pandemic, this process can be quite challenging for caregivers. Because caregivers have to spend a long time together with patients during the periods of lockdown and restrictions, they may feel psychologically constrained apart from the real restrictions experienced. In the COVID-19 pandemic, studies with caregivers of dementia patients showed that caregivers felt overloaded with their role and were more likely to experience distress.<sup>[17,18]</sup> A study on the psychosocial consequences of COVID-19 restrictions displayed caregivers experienced a high burden on mental and physical health. It was also found that caregivers had higher levels of depression and worsened well-being during the quarantine implemented compared to non-caregivers.<sup>[19]</sup> Restrictions and measures taken in the COVID-19 pandemic can be an additional stress factor. In addition, overload on the caregiver role and concerns about the care being given can lead to mental health deterioration and burnout.<sup>[20]</sup> In a study conducted during the COVID-19 pandemic quarantines in

**Table 4. Comparison of the Changes in the Total Mean Scores of MBI and ZCBS with Sociodemographic Characteristics and the Description**

Sociodemographic Characteristics	n	MBI Change Mean± SD	t / F	p	ZCBS Change Mean± SD	t / F	p
Gender							
Male	21	5,191±7,339			6,810±9,108		
Female	26	5,115±6,439	0,037	0,970	8,039±7,119	-0,519	0,606
Marital Status							
Married	36	5,944±7,286			7,778±8,240		
Single	11	2,546±3,984	1,474	0,147	6,546±7,448	0,443	0,660
Education Level							
Illiterate	8	14,125±8,593			13,250±12,279		
Primary School	25	3,240±5,093			6,280±7,045		
Secondary School	8	4,750±3,105	8,898	<0,001 PostHoc= 1>2, 1>3, 1>4 (p<0.05)	7,750±6,541	1,973	0,132
University	6	1,667±4,412			4,500±2,881		
Employment Status							
Employed	20	1,150±3,646			6,100±7,174		
Unemployed	27	8,111±7,084	-4,011	<0,001	8,519±8,546	-1,025	0,311
Household Income							
<2000 TI	10	13,500±7,590			15,400±10,178		
2000-5000 TI	25	4,600±3,958	24,360	<0,001 PostHoc= 1>2, 1>3, 2>3 (p<0.05)	6,160±6,149	8,862	<0,001 PostHoc= 1>2, 1>3 (p<0.05)
5000> TI	12	-0,667±3,143			3,667±4,849		
Duration of Caregiving							
1-5 Years	13	0,000±3,440			3,846±4,616		
5-10 Years	21	4,333±4,163	16,380	<0,001 PostHoc= 2>1, 3>1, 3>2 (p<0.05)	5,857±6,207	7,403	0,002 PostHoc= 3>1, 3>2 (p<0.05)
>10 Years	13	11,615±7,763			13,769±9,901		
Degree of Affinity of the Patient							
Spouse and Child	18	6,222±8,531			10,333±10,949		
Parents	18	5,444±6,662	0,837	0,440	6,111±5,444	1,980	0,150
Sibling	11	2,909±2,119			5,091±3,986		
Gender of the Patient							
Male	37	4,730±6,208			7,189±6,699		
Female	10	6,700±8,795	-0,812	0,421	8,600±12,076	-0,491	0,626
Diagnosis of the Patient							
Bipolar Affective Disorder	26	5,808±5,865			8,654±9,389		
Schizophrenia and other psychoses	21	4,333±7,838	0,738	0,465	6,048±5,749	1,113	0,271
Patient's Medication Compliance (Perceived by the caregiver)							
Low	16	11,938±6,688			14,063±9,726		
Moderate	17	3,353±2,499	30,476	<0,001 PostHoc= 1>2, 1>3, 2>3 (p<0.05)	4,882±3,407	12,588	<0,001 PostHoc= 1>2, 1>3 (p<0.05)
High	14	-0,429±2,980			3,143±4,538		
Caregiver's COVID History							
Present	21	9,714±7,170			11,571±9,626		
None	26	1,462±3,432	5,188	<0,001	4,192±4,280	3,509	0,003

Independent Groups T-Test; Anova Test; PostHoc:Tukey, LSD, MBI: Maslach Burnout Inventory, ZCBS: Zarit Caregiver Burden Scale

Japan, there was an increased anxiety and an increase in the levels of caregiver burdens experienced by individuals looking after patients with schizophrenia due to the difficulties of care during the quarantine process.<sup>[21]</sup> Like everyone in the society, caregivers may also be affected psychologically. Even though the number of cases and deaths increased rapidly during the pandemic process, COVID-19 caused more psychological effects than death.<sup>[22]</sup> In addition, negative mental changes in the patients they care for may affect the caregivers. Some studies have shown that some mental illnesses may recur during the COVID-19 pandemic. Recurrent psychoses or new-onset psychoses have been reported in many case studies or case series,<sup>[23]</sup> and the pandemic, which is risky for many

diseases, may also be risky in terms of BAD recurrence.<sup>[24]</sup> During the pandemic process, when CMHC activities were canceled or restricted, burnout and burden levels of the caregivers might have increased both due to the negative changes observed in the patients they look after and because of the negative effects of the pandemic they experienced firsthand.

In this study, the increase in the total levels of burnout and burden of the caregivers did not differ significantly according to the gender, marital status, the degree of affinity of the patient and the diagnosis of the patient. Considering the education level, it was seen that the increase in burnout levels of those with lower education levels, especially those who

were illiterate, was higher. However, there was no significant difference between education level and caregiver burden. The reason for this may be that the lack of information about COVID-19 and about caregiving increases the burnout levels in caregivers with lower education background. In addition, the increase in burnout levels of employed caregivers was lower than those of unemployed caregivers, but there was no significant difference between employment and the levels of caregiver burden. The reason for this may be that employed individuals are busy during work. Being busy may create a positive mood in people and may bring happiness along with it.<sup>[25]</sup> Burnout levels may have increased less in employed caregivers, both for being busy and because of the economic contribution of their jobs. Another finding that supports this is that, as the income levels of caregivers decreased, burnout levels and caregiver burden increased more in this study. In another study, it was found that among parents who look after children with chronic diseases, those with a lower income level had higher caregiver burdens.<sup>[26]</sup> Apart from the social difficulties it brought, the COVID-19 pandemic also caused difficulties in working life.<sup>[27]</sup> The COVID-19 pandemic has been a difficult process for caregivers, as it is for many people, due to social distance measures, reduced participation in activities, and deprivation of many social opportunities. When these are followed by losing one's job, financial uncertainty, as well as increased stress, it creates more psychological pressure.<sup>[28]</sup>

Again, in the results of the study, it was seen that the increase in burnout and caregiver burden was higher in those who had been giving care for a longer time. As the duration of caregiving increases, it may be an expected result that burnout and the burden of caregivers increase due to the material and moral responsibilities undertaken, due to the fatigue that occurs over time, and due to the more intense difficulties experienced especially during the pandemic. Consistent with this result, in a study conducted with caregivers of dementia patients in the COVID-19 pandemic, those who provided care for a longer period of time had more mental distress than those who provided care for a shorter period of time.<sup>[20]</sup>

As another result of the study, burnout and burden levels of caregivers of patients with lower medication compliance increased more than those of caregivers of patients with moderate and high medication compliance. Non-compliance to treatment is a factor that increases mortality and morbidity. It can increase hospital readmissions and thus cause familial, economic and social problems and reduce the patient's quality of life.<sup>[29]</sup> In a study that included patients with schizophrenia, schizoaffective disorder and BAD during the COVID-19 pandemic, it was observed that one out of five patients discontinued their psychiatric medications and 30% of patients' symptoms worsened during quarantine.<sup>[30]</sup> In another study, it was observed that patients who benefited from CMHC activities had higher compliance to medical treatment.<sup>[31]</sup> The decrease in medication compliance in

patients due to difficulties in accessing CMHC services during the pandemic may be the reason for the increased burnout and burden levels seen in caregivers.

In the results of this study, the burnout and burden levels of caregivers with a history of COVID-19 increased more. COVID-19, like other coronaviruses, is associated with psychiatric outcomes. In a study of 402 people with a history of COVID-19, 55% of participants showed at least one psychiatric illness.<sup>[32]</sup> Caregivers with COVID-19 may have shown more burnout and increased caregiving burden due to both the psychological and physiological effects of the process they experienced.

This study had some limitations. First of all, the study was conducted with a small sample, since the number of patients who regularly visited Elaziğ CMHC and the number of caregivers of these patients were limited. New studies to be conducted by CMHCs with more active participation of patients might be important in terms of supporting these results. In addition, this single-centered study might be supported by a new multi-center study. A limitation of this study was that negative changes in the mental health of the participants due to the COVID-19 pandemic were not identified. Another limitation is that the clinical status and clinical course of the patients are not included in this study.

## CONCLUSION

As a result, CMHCs facilitate the lives of both the patient and their caregivers in terms of the patients' follow-up and treatment and their rehabilitation process. They also provide a great service in the field of psychiatry thanks to their various supporting areas. In this study, the increased burnout and burden levels of the caregivers of the patients who could not maintain their active participation in CMHC activities during the COVID-19 pandemic lockdown and restriction periods supported the importance of CMHC services. In addition, in line with the results of the study, caregivers should be supported psychiatrically during the pandemic process.

## ETHICAL DECLARATIONS

**Ethics Committee Approval:** The study was carried out with the permission of Covid Ethics Committee (Date: 27.05.2021, Decision No: 2021/07-30).

**Informed Consent:** All patients signed the free and informed consent form.

**Referee Evaluation Process:** Externally peer-reviewed.

**Conflict of Interest Statement:** The author has no conflicts of interest to declare.

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**Author Contributions:** All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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