



## Original Article

# How did the COVID-19 pandemic affect outpatient presentations and consultation requests at a university hospital psychiatry clinic in Turkey?

İ Zekiye Çelikbaş, İ Sedat Batmaz, İ Esmâ Akpınar Aslan, İ Burcu Eser, İ İlker Güneysu,  
İ Ahmet Ekrem Savaş, İ Sare Aydın

Department of Psychiatry, Tokat Gaziosmanpaşa University Faculty of Medicine, Tokat, Turkey

### Abstract

**Objectives:** The aim of this study was to investigate the change in sociodemographic characteristics and the diagnostic distribution of patients who presented at a psychiatric clinic in Turkey or were the subject of a consultation request during the coronavirus 2019 (COVID-19) pandemic compared with the pre-pandemic period.

**Methods:** The research included patients who presented at the Tokat Gaziosmanpaşa University Research and Practice Hospital Psychiatry Outpatient Clinic as well as consultation cases requested by the clinic during 3 periods that reflected conditions prior to and after the declaration of a pandemic: March 12-June 9, 2020, December 13, 2019-March 11, 2020, and March 12-June 9, 2019. An independent samples t-test, one-way analysis of variance or chi-squared test was used to provide statistically descriptive analyses and intergroup comparisons.

**Results:** A total of 5139 cases, 4634 outpatient presentations and 505 consultations, were included in the study. The number of outpatient clinic presentations decreased significantly during the pandemic. The most common psychiatric diagnoses were anxiety disorders (35.8%) and depression disorders (30.2%). The proportional change in depression and sleep disorders was statistically significant during the pandemic; anxiety (n=94, 40.9%) and depression (n=89, 38.7%) complaints increased the most. Inpatient (n=95, 22.9%) and emergency room consultations (n=12, 13.3%) were lower during the pandemic period measured. There was no significant difference in the diagnostic distribution of inpatient consultations during the pandemic period; however, there was a significant increase in the number of requests for consultation from the emergency room for delirium cases.

**Conclusion:** The number of outpatient clinic presentations and consultation requests decreased during the pandemic period. Patients with depression particularly experienced exacerbation, and the number of delirium consultations in the emergency room increased significantly.

**Keywords:** COVID-19 pandemic; consultation; healthcare access; psychiatry.

Pneumonia cases of unknown etiology were reported on December 31, 2019 in Wuhan City, in the Hubei Province of China, and the agent was defined as a new coronavirus on January 7, 2020.<sup>[1]</sup> The first case in Turkey was seen on March 11, 2020, and on the same date, coronavirus disease (COVID-19), caused by the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) virus, was declared a pandemic by

the World Health Organization.<sup>[2]</sup>

The COVID-19 pandemic has become a global challenge. The threat to bodily well-being, the poor understanding of the nature of the virus, and the uncertainty of its course constitute a serious source of stress. Although isolation measures taken to prevent the spread of the virus have been quite effective in terms of physical protection against the disease, they can con-

**Address for correspondence:** Zekiye Çelikbaş, Tokat Gaziosmanpaşa Üniv. Tıp Fak. Ruh Sağ. ve Hastalıkları Anabilim Dalı, Tokat, Turkey

**Phone:** +90 356 214 94 44 **E-mail:** zekiye.celikbas@gop.edu.tr **ORCID:** 0000-0003-4728-7304

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**What is presently known on this subject?**

- Studies have demonstrated that events such as a new virus that has become a pandemic, like COVID-19, for which there was no evidence-based treatment or vaccine at the time of the study, cause public panic and anxiety.

**What does this article add to the existing knowledge?**

- A significant decrease was observed in both outpatient clinic presentations and consultation requests during the pandemic. The most common psychiatric diagnoses were anxiety and depression disorders, and there was a statistically significant change in depression and sleep disorder diagnoses compared with the pre-pandemic period.

**What are the implications for practice?**

- The epidemiological data of this study will be useful to understanding changes to the mental health profile in Turkey during an epidemic in order to make the necessary preparations for the continuing effects of the COVID-19 pandemic and future conditions. It is important to pay attention to the increase in certain diagnoses, such as delirium, depressive disorders, and sleep disorders, and to take the necessary precautions to treat the negative consequences of not being able to reach physicians who regulate the treatment of patients with chronic mental disorders and to prepare the means to perform close follow-up of patients who are diagnosed for the first time or whose condition worsens in such circumstances.

tribute to mental uncertainty, fear, and hopelessness about the future, as well as panic-based behaviors. A practical desire to enforce cleanliness or sterilization routines during a pandemic caused by an infectious virus may lead to an increase in mental disorders associated with obsessive-compulsive disorder.<sup>[3,4]</sup> When restrictions on movement are imposed, patients may panic purchase and overstock medical products and other items out of fear, despite a continued supply of essential products.<sup>[5]</sup> Social isolation for patients with recurrent depressive disorder may constitute a stress factor that causes a severe exacerbation of depressive symptoms by jeopardizing the normal daily routine and social rhythm. Generalized anxiety disorder, chronic insomnia<sup>[6]</sup> and even suicidal behaviors may increase.<sup>[7]</sup> Similar global outbreaks have previously been shown to trigger a wave of fear and anxiety.<sup>[8]</sup> Feelings of fear, anger, anxiety, panic, and loneliness may arise in quarantine as a result of isolation or other causes. Problems experienced by the general public may be elevated in those with previous disorders, and post-traumatic stress disorder, suicide attempts, paranoia, and nihilistic delusions may occur in cases of severe anxiety.<sup>[8]</sup> Patients with bipolar disorder and schizophrenia may experience relapses due to disruption of their follow-up, increased stress levels, or non-adherence to their drug treatment. This may even have fatal outcomes for patients with substance use disorder. Inability to obtain the substance of addiction may induce serious withdrawal symptoms and medical emergencies such as delirium or seizures, which can be life-threatening, particularly if there is insufficient access to emergency services.<sup>[9]</sup>

COVID-19 is caused by a novel virus, and the initial absence of an evidence-based treatment or vaccine caused significant anxiety.<sup>[10]</sup> Findings from China indicated that more than 25% of the general population experienced symptoms of moderate or severe stress or anxiety in response to the COVID-19 outbreak.<sup>[11]</sup> In a study evaluating cases admitted to a psychi-

atric clinic between January and March 2020, it was demonstrated that major depressive disorder, generalized anxiety disorder, insomnia, and panic disorder were the primary mental illnesses seen.<sup>[12]</sup> A systematic review of mental disorders during previous epidemics reported that 42% of patients had insomnia, 38% had impaired attention and concentration, 36% had anxiety, 34% had memory disorders, 33% had depressive mood, 28% had confusion, and 21% had altered states of consciousness.<sup>[13]</sup> Some studies have shown that 20% to 25% of individuals with a prior psychiatric disorder experienced a decline during the pandemic.<sup>[14,15]</sup>

Considering this information, it is anticipated that there will be a great need to manage the emergence and treatment of mental disorders during and after the pandemic period. A number of changes should be made to the provision of mental health services in order to meet this need.<sup>[16]</sup> Measures taken to address the pandemic, such as curfews, quarantine practices, and isolation at home, cause a restriction in access to health services. It has been reported that presentations to a psychiatric emergency room in the USA significantly declined during the pandemic<sup>[17]</sup> and that there was a marked reduction in clinical notes documenting psychiatric symptoms in a study of 5 hospitals.<sup>[18]</sup>

The objective of this study was to investigate the sociodemographic characteristics, diagnostic distribution, and change in clinical characteristics of the patients who presented at a single psychiatry clinic or were seen as the result of a consultation request from other departments from the date of the first case in Turkey until the outbreak became more stabilized. A “psychological epidemic” of mental health problems, such as acute stress disorders, post-traumatic stress disorder, anxiety disorders, sleep disorders, depressive disorders, and suicide may be forthcoming. Therefore, mental health professionals, including psychiatric nurses, have an important role in recognizing individuals with mental illness and providing the necessary treatment and care.

It was hypothesized that there would be a decrease in the number of applications to the psychiatry outpatient clinic during the pandemic, that patients diagnosed for the first time during the pandemic would often be diagnosed with anxiety disorder or obsessive-compulsive disorder, and that there would be fewer consultations requested than in other periods due to reduced elective hospitalizations during the pandemic period. To the best of our knowledge, this is the first epidemiological research in this field in Turkey and the findings could provide useful data to guide mental health professionals on the prevalence of mental disorders that may surface in the near future.

## Materials and Method

### Ethics Approval

This research was approved by the Tokat Gaziosmanpaşa University Faculty of Medicine Clinical Research Ethics Committee on June 11, 2020 (no: 83116987-280).

## Study Type and Sample

This was a retrospective, cross-sectional, hospital-based study. The research included patients who presented at the Tokat Gaziosmanpaşa University Research and Practice Hospital Psychiatry Outpatient Clinic between March 12, 2020 and June 9, 2020 (90 days), December 13, 2019 and March 11, 2020 (90 days), and March 12, 2019 and June 9, 2019 (90 days), as well as inpatient and emergency service consultation cases from the same date ranges. The sample consisted of 5129 cases: 4634 were admitted to the outpatient clinic, 415 who were consult cases from inpatient services, and 80 who were consult cases from the emergency service. None of the patients enrolled in the study was diagnosed with COVID-19.

## Inclusion and Exclusion Criteria

Patients who presented with requests for medical reports were excluded from the study. Only a single diagnosis and a single consultation request were considered in cases with >1 consultation request during the same hospitalization period, and only the diagnosis at the first presentation in cases with >1 outpatient clinic presentation within the specified date ranges was used.

## Procedure

In the first stage, hospital database records from the specified date range were selected, and information on age, gender, type of presentation, the period of the visit (pre or post pandemic conditions), the diagnosis they received, if the first diagnosis was made prior to or during the pandemic and whether there was an exacerbation, were recorded. Diagnostic classification was carried out in 2 steps. A diagnosis classification was made using the 3-digit codes of the International Classification of Disease 10 provided in Chapter V(F) on mental and behavioral disorders.<sup>[19]</sup> Next, diseases were grouped based on the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.<sup>[20]</sup> Diagnoses of schizophrenia (F20), schizoaffective disorders (F25), nonorganic psychotic disorders, and other nonorganic psychotic disorders (F28) were classified as "schizophrenia spectrum and other psychotic disorders"; bipolar affective disorders (F31) and mood disorders (F38) as "bipolar and related disorders"; depressive episode (F32) and recurrent depressive disorder (F33) diagnoses as "depression disorders"; dissociative (conversion) disorders (F44) and somatoform disorders (F45) as "somatic symptom and related disorders." The diagnosis of delirium not induced by alcohol and other psychoactive substances (F05), which is frequently encountered in consultations, as well as anxiety disorders (F41), obsessive-compulsive disorders (F42), reaction to severe stress, and adjustment disorders (F43), nonorganic sleep disorders (F51), and intentional self-harm (X60-84), which are commonly seen in the outpatient clinic, were addressed as separate diagnostic groups. Patients who were not diagnosed with any mental disorder after psychiatric examination were coded as "general psychi-

atric examination (Z00.4)." Other ICD-10 diagnoses were classified as "other diagnoses." The study cases were divided into 3 groups based on the date of presentation/consultation: the pre-pandemic first group (PPFG), pre-pandemic second group (PPSG), and the pandemic period group (PPG). In addition, the clinical notes of the presentations during the pandemic period were examined and those that described an increase in the complaint were categorized as "exacerbation."

## Assessment Tools

Sociodemographic and clinical data collection form: The researchers created a form to record the patient's identification number, file number, age, gender, form of presentation, the period of presentation, the diagnosis they received at the time, whether the first diagnosis had been made prior to the pandemic or afterwards, and whether there was an exacerbation.

## Statistical Analysis

Descriptive statistical analyses were performed for the demographic and clinical data and were expressed using mean (SD) and frequency (%) values. The age, gender, and diagnosis distribution of the groups (PPFG, PPSG, and PPG) was compared using an independent samples' t-test, one-way analysis of variance, or a chi-squared test. MedCalc Statistical Software version 17.2 software (MedCalc Software bv, Ostend, Belgium) was used to perform the analysis.

## Results

### Outpatient Clinic Presentations

A total of 4634 outpatient clinic applications were included in the study: PPFG comprised 32.7% (n=1515), PPSG 46.1% (n=2139), and PPG 21.2% (n=980). One-way analysis of variance revealed no significant difference between the groups in terms of age ( $F=1.89$ ,  $p>0.05$ ), and a chi-squared test yielded no significant difference based on gender ( $\chi^2=5.26$ ,  $p>0.05$ ). The most common diagnoses during the pandemic period were depression disorders (n=296, 30.2%) and anxiety disorders (n=351, 35.8%). In the pre-pandemic period, the most common diagnoses in PPFG were anxiety disorders (n=524, 34.6%), bipolar and related disorders (n=321, 21.2%), and depression disorders (n=211, 13.9%), while the most common in PPSG were anxiety disorders (n=773, 36.1%), depression disorders (n=607, 28.4%), and bipolar and related disorders (n=133, 6.2%). While the diagnosis rates of delirium not induced by alcohol and other psychoactive substances, depression disorders, somatic symptom disorder and related disorders, and nonorganic sleep disorders were higher in the pandemic period compared to other periods, the proportion of patients diagnosed with schizophrenia spectrum and other psychotic disorders, bipolar and related disorders, obsessive-compulsive disorders, and intentional self-harm decreased. The change in depression and sleep disorders seen during the pandemic period was statistically significant ( $\chi^2=340.50$ ,  $p<0.001$ ) (Table 1).

**Table 1. Examination of outpatient clinic presentations in terms of sociodemographic characteristics and diagnosis distribution between groups**

Outpatient clinic presentations	PPFG (n=1515)	PPSG (n=2139)	PPG (n=980)	F / $\chi^2$
Age (years)	46.44 (16.67)	47.31 (17.29)	46.21 (16.95)	1.89
Female gender	914 (60.3)	1331 (62.2)	568 (58.0)	5.26
Diagnosis distribution				
Delirium, not induced by alcohol and other psychoactive substances	27 (1.8)	30 (1.4)	25 (2.6)	340.50*
Schizophrenia spectrum and other psychotic disorders	91 (6.0)	112 (5.2)	47 (4.8)	
Bipolar and related disorders	321 (21.2) <sup>a</sup>	133 (6.2) <sup>b</sup>	63 (6.4) <sup>b</sup>	
Depression disorders	211 (13.9) <sup>a</sup>	607 (28.4) <sup>b</sup>	296 (30.2) <sup>b</sup>	
Anxiety disorders	524 (34.6)	773 (36.1)	351 (35.8)	
Obsessive-compulsive disorders	49 (3.2)	52 (2.4)	25 (2.1)	
Reaction to severe stress and adjustment disorders	32 (2.1)	55 (2.6)	25 (2.6)	
Somatic symptom and related disorders	5 (0.3)	13 (0.6)	9 (0.9)	
Nonorganic sleep disorders	7 (0.5) <sup>a</sup>	18 (0.8) <sup>a</sup>	19 (1.9) <sup>b</sup>	
General psychiatric examination	171 (11.3)	235 (11.0)	86 (8.8)	
Intentional self-harm	25 (1.7)	22 (1.0)	7 (0.7)	
Other	52 (3.4)	89 (4.2)	31 (3.2)	

\*P<0.001. Results are given as mean (SD) or frequency (%). Subscripts indicate significant differences. PPFG: Pre-pandemic first group; PPG: Pandemic period group; PPSG: Pre-pandemic second group.

**Table 2. Age, gender, and diagnosis distribution of outpatient clinical admission patients who received a psychiatric diagnosis for the first time before or during the pandemic**

	First diagnosis pre-pandemic (n=4428)	First diagnosis in pandemic period (n=206)	t / $\chi^2$
Age (years)	46.64 (16.89)	50.07 (19.30)	-2.83*
Female gender	2708 (61.2)	105 (51.0)	8.56*
Diagnosis distribution			
Delirium, not induced by alcohol and other psychoactive substances	60 (1.4) <sup>a</sup>	22 (10.7) <sup>b</sup>	225.38**
Schizophrenia spectrum and other psychotic disorders	246 (5.6) <sup>a</sup>	4 (1.9) <sup>b</sup>	
Bipolar and related disorders	516 (11.7) <sup>a</sup>	1 (0.5) <sup>b</sup>	
Depression disorders	1065 (24.1)	49 (23.8)	
Anxiety disorders	1589 (35.9) <sup>a</sup>	59 (28.6) <sup>b</sup>	
Obsessive-compulsive disorders	121 (2.7) <sup>a</sup>	1 (0.5) <sup>b</sup>	
Reaction to severe stress and adjustment disorders	92 (2.1) <sup>a</sup>	20 (9.7) <sup>b</sup>	
Somatic symptom and related disorders	22 (0.5) <sup>a</sup>	5 (2.4) <sup>b</sup>	
Nonorganic sleep disorders	35 (0.8) <sup>a</sup>	9 (4.4) <sup>b</sup>	
General psychiatric examination	462 (10.4) <sup>a</sup>	30 (14.6) <sup>b</sup>	
Intentional self-harm	50 (1.1)	4 (1.9)	
Other	170 (3.8) <sup>a</sup>	2 (1.0) <sup>b</sup>	

\*P<0.01; \*\*P<0.001. Results are given as mean (SD) or frequency (%). Subscripts indicate significant differences.

### Cases of First Psychiatric Diagnosis During the Pandemic Period Among Outpatient Presentations

Of 4634 individuals who presented at the outpatient clinic, 206 were diagnosed with a psychiatric diagnosis for the first time during the pandemic period, and 4428 in the 2 pre-pandemic periods.

The most common diagnoses during the pandemic were anxiety disorders (n=59, 28.6%) and depression disorders (n=49, 23.8%). The patients with an initial diagnosis before the pandemic were younger (t=-2.83, p<0.01) and there was a higher ratio of female patients ( $\chi^2=8.56$ , p<0.01).

**Table 3. Age, gender and diagnosis distribution of cases with and without exacerbation during the pandemic period**

	Cases with exacerbation during the pandemic period (n=230)	Cases without exacerbation during the pandemic period (n=750)	t / $\chi^2$
Age (years)	46.46 (17.23)	45.41 (15.99)	0.82
Female gender	147 (63.9)	421 (56.1)	4.37*
Diagnosis distribution			
Delirium, not induced by alcohol and other psychoactive substances	3 (1.3)	22 (2.9)	42.11**
Schizophrenia spectrum and other psychotic disorders	8 (3.5)	39 (5.2)	
Bipolar and related disorders	12 (5.2)	51 (6.8)	
Depression disorders	89 (38.7) <sup>a</sup>	207 (27.6) <sup>b</sup>	
Anxiety disorders	94 (40.9)	257 (34.3)	
Obsessive-compulsive disorders	7 (3.0)	14 (1.9)	
Reaction to severe stress and adjustment disorders	3 (1.3)	22 (2.9)	
Somatic symptom and related disorders	2 (0.9)	7 (0.9)	
Nonorganic sleep disorders	4 (1.7)	15 (2.0)	
General psychiatric examination	3 (1.3)	4 (0.5)	
Intentional self-harm	3 (1.3)	28 (3.7)	
Other			

\*P<0.05; \*\*P<0.001. Results are given as mean (SD) or frequency (%). Subscripts indicate significant differences.

Chi-squared testing indicated that the number of patients diagnosed with delirium, trauma and stressor-related disorders, somatic symptom disorder and related disorders, and sleep disorders for the first time during the pandemic period was significantly higher than prior to the pandemic. In contrast, first-time diagnoses of psychotic disorders, bipolar disorders, anxiety disorders, obsessive-compulsive disorder and related disorders were significantly lower ( $\chi^2=225.38$ ,  $p<0.001$ ). In addition, there was a significant increase in the number of cases in which no disorder was sufficient to provide a diagnosis upon first psychiatric presentation (Table 2).

#### Cases of Exacerbation During the Pandemic Period Among Outpatient Presentations

There were 230 (23.47%) cases of exacerbation and 750 (76.53%) cases without exacerbation in the outpatient clinic applications during the pandemic period. Patients classified as experiencing exacerbation were more often female ( $\chi^2=4.37$ ,  $p<0.05$ ). Cases of anxiety disorders (n=94, 40.9%) and depression disorders (n=89, 38.7%) were the most common to become exacerbated during the pandemic. A chi-squared test revealed that depressive disorders were seen at a higher rate in cases with exacerbation ( $\chi^2=42.11$ ,  $p<0.001$ ) (Table 3).

#### Consultation Requests

The number of consultation requests indicated that inpatient (n=95, 22.9%) and emergency room consultations (n=12, 13.3%) were lower during the pandemic. No significant differ-

ences were found in terms of age and gender in the comparison of PPFPG, PPSG, and PPG between inpatient and emergency service consultations. There was no significant difference between the groups in the diagnostic distribution of inpatient consultations ( $\chi^2=30.81$ ,  $p>0.05$ ); however, there was a significant increase in the number of delirium cases in the emergency department consultations during the pandemic period ( $\chi^2=35.06$ ,  $p<0.05$ ) (Table 4).

## Discussion

While the results of the study confirmed our hypothesis that there would be a decrease in the number of outpatient clinic presentations and consultation requests, the diagnostic distribution of patients who were diagnosed for the first time during the pandemic period was not consistent with our hypothesis. The results also showed that during the pandemic period, depressive patients in particular experienced exacerbation and that the diagnosis of delirium increased significantly in consultation requests from the emergency room.

#### Outpatient Clinic Presentations

The results of the study indicated that outpatient clinic presentations decreased significantly. The most common psychiatric diagnoses were anxiety disorders (35.8%) and depression disorders (30.2%) during the pandemic period. The significant decrease in outpatient clinic presentations was consistent with other data in this area.<sup>[17,18]</sup> Home isolation measures implemented in order to reduce the transmission of the virus in



**Table 4. Age, gender, and diagnosis distribution of inpatient and emergency room consultations between groups**

	Inpatient consultations				Emergency room consultations			
	PPFG (n=147)	PPSG (n=173)	PPG (n=95)	F / $\chi^2$	PPFG (n=45)	PPSG (n=33)	PPG (n=12)	F / $\chi^2$
Age (years)	50.32 (19.65)	55.04 (20.95)	54.18 (22.36)	2.19	35.93 (12.62)	31.39 (13.73)	41.75 (19.90)	2.31
Female gender	64 (43.5)	92 (53.2)	42 (44.2)	3.57	22 (48.9)	21 (63.6)	3 (25.0)	5.44
Diagnosis distribution								
Delirium, not induced by alcohol and other psychoactive substances	27 (18.4)	29 (16.8)	24 (25.3)	30.81	0 (0.0) <sup>a</sup>	1 (3.0) <sup>a</sup>	3 (35.0) <sup>b</sup>	35.06 <sup>*</sup>
Schizophrenia spectrum and other psychotic disorders	9 (6.1)	9 (5.2)	2 (2.1)		9 (20.0)	5 (15.2)	0 (0.0)	
Bipolar and related disorders	4 (2.7)	3 (1.7)	3 (3.2)		3 (6.7)	2 (6.1)	2 (16.7)	
Depression disorders	7 (4.8)	31 (17.9)	11 (11.6)		1 (2.2)	0 (0.0)	1 (8.3)	
Anxiety disorders	26 (17.7)	26 (15.0)	10 (10.5)		2 (4.4)	0 (0.0)	1 (8.3)	
Obsessive-compulsive disorders	1 (0.7)	2 (1.2)	1 (1.1)		1 (2.2)	1 (3.0)	0 (0.0)	
Reaction to severe stress and adjustment disorders	20 (13.6)	17 (9.8)	17 (17.9)		1 (2.2)	0 (0.0)	0 (0.0)	
Somatic symptom and related disorders	3 (2.0)	1 (0.6)	4 (4.2)		0 (0.0)	0 (0.0)	1 (8.3)	
Nonorganic sleep disorders	4 (2.7)	6 (3.5)	3 (3.2)		0 (0.0)	0 (0.0)	0 (0.0)	
General psychiatric examination	11 (7.5)	14 (8.1)	6 (6.3)		1 (2.2)	0 (0.0)	0 (0.0)	
Intentional self-harm	25 (17.0)	22 (12.7)	7 (7.4)		22 (48.9)	22 (66.7)	4 (33.3)	
Other	10 (6.8)	13 (7.5)	7 (7.4)		5 (11.1)	2 (6.1)	0 (0.0)	

\*P<0.05. Results are given as mean (SD) or frequency (%). Subscripts indicate significant differences. PPFG: Pre-pandemic first group; PPG: Pandemic period group; PPSG: Pre-pandemic second group.

Turkey may be the reason for the decrease in outpatient clinic presentations. The distribution of cases of psychotic disorder, obsessive-compulsive disorder, and intentional self-harm was lower than that prior to the pandemic. The decrease in the number and proportion of patients with obsessive-compulsive disorder during the pandemic period contradicted our hypothesis. This may be related to avoidance behavior of patients, such as remaining isolated at home and not presenting to an outpatient clinic due to fear of contracting the disease. A study conducted of individuals exposed and quarantined during the 2003 outbreak of severe acute respiratory syndrome in Canada indicated that after quarantine, some 54% avoided people coughing or sneezing, 26% avoided crowded and closed places, and 21% avoided all public places.<sup>[21]</sup> Although the present study did not include individuals who underwent quarantine, it is likely that lengthy home isolation may lead to similar mental effects. In addition, the prevalence of infected individuals in society, fear of infecting family members, increase in workload, economic difficulties and loss of job security, inability to access basic resources, curfews, frequent media coverage of the effects of the epidemic, and some psychosocial factors, such as uncertainty about the future, may have had a role in reducing the number of patients with anxiety-related disorders who presented at psychiatry outpatient clinics.<sup>[11,22-25]</sup> Individuals with chronic disorders may often be able to obtain their medications from a pharmacy without a prescription or may have been unable to reach their physician, which may also have contributed to the decrease in the presentation rate of patients with chronic disorders such as a psychotic disorder or bipolar and related disorders. There were only 2 diagnostic groups with a statistically significant increase in outpatient clinic presentations during the pandemic period: depressive disorders and sleep disorders. This may be a reflection of common reactions to conditions such as a pandemic. The relatively high prevalence of insomnia and depressive mood found in previous reviews is consistent with these results.<sup>[14]</sup> However, the rate of trauma-related disorders (2.6%) and insomnia (1.9%) was relatively low during the pandemic period in this study. Traumatic stress, depression, anxiety, and insomnia were the most common psychiatric symptoms found in studies conducted of healthcare professionals during the COVID-19 pandemic.<sup>[26,27]</sup> Considering that outpatient clinic presentations present an image

of the general community, diagnoses of severe stress reaction and adjustment disorders as well as nonorganic insomnia may be expected to be higher in a population of healthcare professionals working in difficult conditions and with a high risk of contamination.

### Cases Diagnosed for the First Time

For all 3 study groups, the most common diagnoses of outpatient visits were anxiety disorders and depressive disorders, as in many previous studies in general hospitals.<sup>[28]</sup> Anxiety disorders (28.6%) and depressive disorders (23.8%) were the most common diagnoses in the group of patients who received a psychiatric diagnosis for the first time during the pandemic period. Feelings of uncertainty, fear, and hopelessness about the future experienced during the pandemic likely contributed to disorders such as anxiety and depression. A study of 4872 participants over the age of 18 conducted during the COVID-19 outbreak in Wuhan, China, found a prevalence of depression of 48.3%, anxiety 22.6%, and a combination of depression and anxiety of 19.4% in the general population.<sup>[29]</sup> Our research results showed that the most common diagnoses were anxiety disorders (35.8%) and depression disorders (30.2%) among the cases presenting to psychiatric outpatient clinics during the pandemic and those who received a diagnosis for the first time. However, it is noteworthy that the number of diagnoses of delirium, trauma and stressor-related disorders, somatic symptom and related disorders, and sleep disorders increased significantly among first-time diagnoses, especially during the pandemic period. A study of neuropsychiatric symptoms associated with COVID-19 reported agitation at a rate of 69% and confusion at 65%.<sup>[30]</sup> Previous viral pandemics have also been associated with encephalopathy.<sup>[31]</sup> These data support the heightened frequency of cases diagnosed with delirium. The fact that these diagnoses were encountered more frequently in the patient group who received a diagnosis for the first time may be explained by the following reasons: Pandemic leading to a trauma or stressor adaptation process due to psychosocial factors, the appearance of somatization due to concerns that symptoms may be related to COVID-19, and negative effects on sleep patterns caused by the general pandemic conditions. The smaller number of cases diagnosed with psychotic disorders, bipolar disorder, anxiety disorders, obsessive-compulsive disorder, and other psychiatric disorders during this period may be associated with avoidance behaviors, psychosocial factors that may be related to pandemics, the inability to reach physicians due to changes in the usual work schedule, and drug treatment without consulting a professional or discontinuing drug treatment. The increase in the number of patients who did not receive any psychiatric disorder diagnosis after presenting to and being evaluated in the psychiatry outpatient clinic is also noteworthy. This increase may demonstrate that the public may have been seeking treatment at psychiatric outpatient clinics due to some psychological symptoms experienced while going through a traumatic or stressful period. It

may also indicate that there is insufficient general knowledge about mental disorders and a lack of awareness that some reactions experienced during unusual periods are quite normal. Therefore, the increase might show, albeit indirectly, that there is a genuine need for additional community-based educational and informational activities. It would appear to be necessary to continue and expand training on issues such as understanding that not every mental health symptom or distressed mood is a condition to be considered something to get rid of as soon as possible, ways to cope with stress, and the meaning of a diagnosis of mental disorder.

### Cases of Exacerbation

Only patients with depressive disorder experienced exacerbation at a statistically significant level during the pandemic period. The pandemic and related psychosocial factors can negatively affect patients, and especially those with depression. The changes seen in the number of cases diagnosed with intentional self-harm behaviors, anxiety disorders, and obsessive-compulsive disorder may also reach a statistically significant level in a similar study of a larger sample.

### Consultations

There was a decrease in outpatient clinic presentations as well as inpatient and emergency room consultations during the pandemic period. This may be explained by postponement of elective surgeries and non-emergency hospitalizations as a part of the measures taken to reduce the risk of transmission during the pandemic. In addition, the urgency of COVID-19 treatment and the priorities of the treatment teams may have led to consultation request delays, even for mentally challenged individuals. To the best of our knowledge, a decrease in consultation requests during the pandemic has not been previously reported in the literature. It would be useful to examine the effects of this change on the provision of mental health services.

### Possible Implications for Clinical Practice

These epidemiological data can be used to understand the changes to the mental health profile in Turkey during epidemic periods and to take the necessary measures to address these conditions. It is of utmost importance to note the increase in certain diagnoses such as delirium, depressive disorders, and sleep disorders. It is essential to take precautions and be prepared in terms of the potential negative consequences for patients with chronic mental disorders who cannot reach their physician and manage their own treatment during the epidemic periods, to implement the means to follow up closely with patients who are diagnosed for the first time or those whose condition deteriorates, as well as other necessary arrangements. The capacity to provide consultation-liaison psychiatry to meet the mental health needs of patients should not be disrupted, even during an epidemic. These measures

will ensure the ability to overcome the problems that may arise in access to needed mental health services.

### Limitations and Strengths

Since this study was retrospective and descriptive, it may not be possible to generalize the results. Only the early phase of the pandemic and a period of social isolation were evaluated. Furthermore, the results of the study may have been affected by the number of COVID-19 cases in Tokat province and by the fact that the isolation measures taken in the area may have been less comprehensive than in other provinces. The lack of data on inpatient psychiatric patients may be another limitation. However, population screening at a large scale, with detailed examination of the diagnosis distribution of clinics and consultations, group comparisons made by evaluating the data records of 3 months before the pandemic and the previous year are strengths of the study. Furthermore, this is the first known published research to demonstrate that psychiatric consultations decreased significantly during the pandemic in Turkey. This study illustrated the effect of the pandemic on mental health service provision and contributes to a small number of publications in the literature with such data. Significant results also include a demonstration of the mental health effects of the pandemic in Turkey and the diagnostic distribution changes with the pandemic.

### Conclusion

According to the results of our study, patients who were diagnosed with a psychiatric disorder for the first time during the pandemic period were most often found to have anxiety and depression disorders, while the patients who experienced exacerbation were most often those with depression disorders. A decrease was observed in the number of outpatient clinic applications, and inpatient service and emergency consultations during the pandemic period. Future studies that examine presentations in a period of normalization and when isolation measures are not necessary, as well as detailed examinations of relapse, recurrence, and first-time diagnoses associated with the COVID-19 pandemic are needed. This research will contribute to the literature and our ability to predict and plan for the effects of an epidemic on public mental health and guide mental health professionals in understanding the psychological impact of social traumas that may be encountered in the future.

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