


How did the COVID-19 pandemic affect child and adolescent psychiatry outpatient clinic admissions? A single-center, retrospective study

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Abstract

Background: The COVID-19 pandemic and the measures for controlling the pandemic adversely affected child and adolescent mental health; however, studies that examined the effects of the pandemic on child and adolescent mental health services are limited. This study aimed to determine the changes in admission to a child and adolescent psychiatry outpatient clinic (CAPOC) in the first year of the COVID-19 pandemic compared with the previous year.

Methods: In this study, the information regarding admissions to Başkent University Faculty of Medicine's CAPOC between March 2019 and March 2021 was examined. Information including age, sex, admission date, the form of admission (first admission/follow-up), and the diagnosis was obtained from the electronic medical record system and the differences between the pre-pandemic period and the pandemic period were assessed.

Results: It was found that during the pandemic, there was a decrease in CAPOC admissions; however, both female admissions and median age increased compared with the previous year. Also, admissions due to obsessive-compulsive disorder and somatic symptom-related disorders increased.

Conclusions: Although there were fewer CAPOC admissions during the pandemic period compared with the pre-pandemic period, there were differences between the age, sex, and diagnosis distributions of the patients between the pandemic and the pre-pandemic period. Understanding the impact of the COVID-19 pandemic on CAPOC admissions will help plan child and adolescent mental health protective measures.

Keywords

child psychiatry, adolescent psychiatry, COVID-19, pandemics, child mental health, mental health services

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Introduction

The coronavirus disease 2019 (COVID 19) pandemic, which started in December 2019, spread all over the world in a short time. To prevent the spread of COVID 19, measures such as the closure of schools and social isolation were taken. This situation changed the life routines of children and adolescents. We searched PubMed, Scopus, and Google Scholars databases using keywords such as: “COVID-19”, “child adolescent mental health”, “child and adolescent psychiatry outpatient” and “Turkey.” Studies have shown that the mental health of many children and adolescents with and without previous psychiatric diagnoses during the COVID-19 pandemic has been adversely affected, and it has been noted that the frequency of various mental health problems, especially anxiety and depression, has increased (Cost et al., 2021; Li et al., 2021; Meherali et al., 2021). In Spain, it was found that there was an increase in symptoms such as attention problems, fatigue, and irritability in children and adolescents during the pandemic. It has also been reported that symptoms worsened, especially in those with a previous diagnosis of ASD and conduct disorder (Lopez-Serrano et al., 2021).

The COVID-19 pandemic has spread in Turkey since March 2020, affects many areas of life (Şeker et al., 2020). The closure of schools and the long curfew for children aged under 18 years in our country changed the daily lives of children and young people. In a study conducted during the first months of the COVID-19 pandemic, mothers and fathers stated that their children had fears related to the coronavirus, obsessions related to contagion, sleep disorders, and somatic symptoms (İlbasmış et al., 2021). Another study reported that the frequency of mental health problems in children increased, and symptoms such as anxiety and depression were more common in girls (Fulya et al., 2021). Moreover, it was shown that fear, anxiety, and behavioral problems have increased in children aged 4–6 years during the pandemic period (Sancili & Tugluk, 2021).

The COVID 19 pandemic and preventive measures have also affected the functioning of hospitals and other healthcare facilities. The effects of this situation was also seen in child and adolescent mental health services. The findings of a survey conducted in England indicated that 45% of young people with probable mental health problems were reluctant to seek help because of the pandemic (Newlove-Delgado et al., 2021). Additionally, it was determined that there was a decrease in child psychiatry admissions in the first 6 months of the pandemic in Ireland compared with the previous 2 years, and it was reported that this might lead to misinterpretations that the problems in this area have decreased (McNicholas et al., 2021). In a study evaluating the functioning of the child and adolescent psychiatry departments of 266 universities from all over Europe, including data from Turkey, during the pandemic period, referrals/requests for assessments to child and adolescent psychiatry decreased by 61% in 2020 but increased by 91% in 2021. (Revet et al., 2021). Despite the decrease in admissions, it has been observed that there have been changes in the reasons for admissions. In a study in Denmark in which psychiatry admissions for those aged under 18 years resulting from the pandemic were evaluated between February and March 2020, and it was noted that these admissions were mainly related to two areas. The first of these was anxiety/depression-based admissions due to fear of contagion of COVID-19, and the second was admissions based on neurodevelopmental disorders, such as attention deficit hyperactivity disorder (ADHD) and ASD, due to the loss of routine (Jefsen et al., 2021). Various studies have shown that the symptoms of children and adolescents diagnosed with obsessive-compulsive disorder (OCD) increased during this period (Nissen et al., 2020; Tanir et al., 2020). In Australia, it was reported that there was a decrease in pediatric admissions during the pandemic period compared with the previous year, but there was an increase of 104% in admissions due to anorexia nervosa (Haripersad et al., 2021).

In the literature, most studies examined the current mental state of children and adolescents and it was seen that the data in Turkey were mostly related to certain patient groups or settings (emergency admissions, inpatient care) (Kose et al., 2021; Ozbaran et al., 2020; Ünver and Perdahlı Fiş, 2021). There were studies from Europe evaluating the functioning of the child and adolescent psychiatry outpatient clinics (CAPOC) during the COVID-19 pandemic; however, there were limited studies were showing the functioning of CAPOCs during the COVID-19 pandemic compared with the previous year specifically in Turkey. This study aimed to fill the gap in the literature by taking into account the cultural differences of Turkey and increasing the etiologic understanding of mental health problems in the COVID-19 pandemic by determining the changes compared with the previous year in admissions to the CAPOC during the pandemic period. For this purpose, in the current study, we examined the number of and reasons for all admissions to our CAPOC from March 2019 to March 2020 and from March 2020 to March 2021, and to determine the differences in the demographics of admissions and the diagnoses between these two periods.

Method

Admissions made to Başkent University Ankara Hospital CAPOC from March 2019 to March 2020 (pre-pandemic) and from March 2020 to March 2021 (pandemic period) were included in the study. The patients' age, sex, date of admission, form of admission (first admission/follow-up), and diagnosis were obtained from the medical recording system through retrospective file scanning.

Admissions to Başkent University CAPOC are made by the direct presentation of the patient's parents or through the referral of physicians from other departments. In Başkent University Faculty of Medicine, Department of Child and Adolescent Psychiatry, patients are mostly seen as outpatients, and there is no inpatient service in the department. On the other hand, patients receiving inpatient treatment in other departments of the hospital for other medical reasons and admissions to the emergency department are evaluated through consultation. There are three outpatient clinics actively working. In our clinic, diagnoses were made according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) diagnostic system. The psychiatric evaluation of the patients was conducted by a senior child and adolescent psychiatrist. There are no standardized assessments or structured interviews used for the diagnosis. The diagnoses of patients according to the DSM-5 system were made after detailed clinical interviews with the parents and children/adolescents by a senior child and adolescent psychiatrist. In patients with multiple comorbid diagnoses, the main diagnosis of the patient's current admission was included in the analysis. Additionally, admissions made due to various periodic developmental problems were classified as "other." This study was approved by Başkent University Institutional Review Board and Ethics Committee (Project no: KA21/305) and supported by the Başkent University Research Fund.

The first patient with COVID-19 was reported on March 11th, 2020, in Turkey, thus the data of all outpatient clinic admissions between March 11th, 2019, and March 11th, 2021, were recorded (Zorlu, 2020). All admissions (including telephone/online/outpatient) during the first 4 months of the pandemic were recorded. In the first 4 months of the pandemic, because there was a curfew for those aged under 18 years in Turkey, a significant part of the follow-ups were made as telephone calls. The operation of the outpatient clinic has returned to its previous routine since the beginning of July 2020; therefore, all outpatient clinic admissions from the beginning of July 2020 to the end of March 2021 and the data of "online interview appointments," which became a routine practice at that time, were recorded. Telephone calls, except for the first 4 months of the pandemic, were excluded because they were not made for psychiatric evaluations. Admissions from the emergency department and inpatient consultations in other departments were also excluded.

The first hypothesis of this study was that there were fewer CAPOC admissions during the pandemic period compared with the pre-pandemic period, and the second hypothesis was that the age, sex, form of admission, and diagnosis distributions of the patients during the pandemic period would be different compared with the pre-pandemic period. The patients were divided into two different groups as pre-pandemic and pandemic period admissions, and the age, sex, form of admission, and diagnosis of the patients were examined between both groups.

Statistical analysis

In the analysis of continuous data, mean and standard deviation were used in data with normal distribution, and median and interquartile range (IQR) were used in data that did not fit normal distribution. The suitability of the data to normal distribution was evaluated using the Kolmogorov–Smirnov and Shapiro–Wilk tests. The difference between continuous data not conforming to normal distribution was evaluated using the Mann–Whitney U test. Numbers and percentages were used for categorical data. The differences between categorical data were evaluated using the Chi-square test. *p*-values of <.05 were considered statistically significant.

Results

It was determined that there were 4708 admissions between March 2019 and March 2020, and 3172 admissions between March 2020 and March 2021. The distribution of cases by month between March 2019 and March 2021 is presented in Figure 1.

It was determined that the median age of the admitted patients during the pre-pandemic period (median: 10, IQR: 7) was lower than that of the admitted patients during the pandemic period (median: 11, IQR: 7), and this difference was statistically significant (*p* < .001). 60 percent of the patients (2827) who were admitted during the pre-pandemic period were male and 40% (1881) were

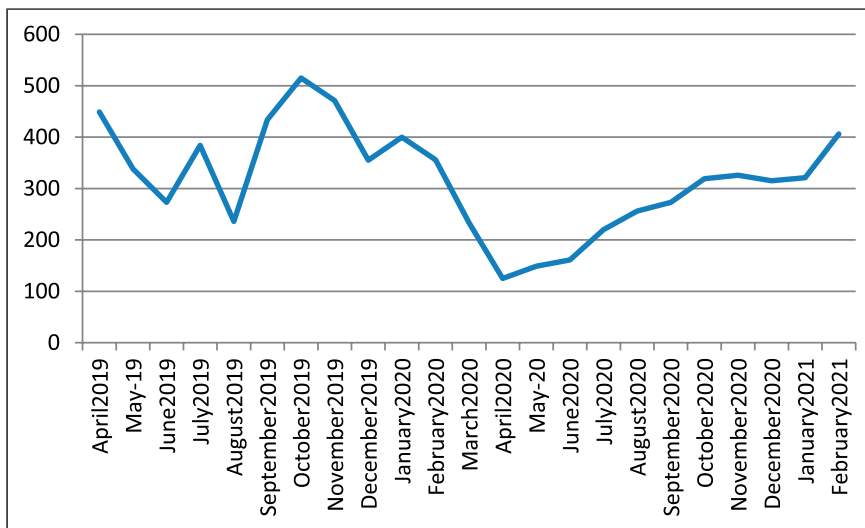


Figure 1. Distribution of number of outpatient clinic admissions by months between March 2019 and March 2021.

female, and 56% (1782) of patients admitted during the pandemic period were male and 44% (1390) were female. Compared with the pre-pandemic period, the number of admissions for female patients increased during the pandemic, and this difference was statistically significant ($\chi^2 = 11.6$, $df(1)$, $p < .001$). The number of first admissions was 732 (15.5%) during the pre-pandemic period and was 548 (17.2%) during the pandemic period. When examined proportionally, the number of outpatient clinic admissions made as first admissions during the pandemic period was relatively higher. This difference was found to be statistically significant ($\chi^2 = 4.16$, $df(1)$, $p = .041$).

Compared with the pre-pandemic period, it was observed that the diagnoses of ADHD, conduct disorder, intellectual disability, and specific learning difficulties decreased during the pandemic period ($p = .002$, $p < .001$, $p = .042$, and $p < .001$, respectively). Conversely, it was found that OCD and somatic symptom-related disorder diagnoses increased ($p < .001$ and $p < .001$, respectively). The distribution of psychiatric diagnoses for patients during the pre-pandemic period and the pandemic period is presented in Table 1.

It was noted that there was a difference in terms of sex in those diagnosed with OCD and somatic symptom-related disorder during the pre-pandemic and pandemic periods. During the pandemic period, compared with the pre-pandemic period, male frequency in patients with OCD increased ($p = .043$). Also, in patients with a diagnosis of somatic symptom-related disorder, the frequency of female sex increased during the pandemic period ($p < .001$). The sex distribution of mental disorders with an increase/decrease in the number of admissions during the pre-pandemic period and during the pandemic period is presented in Table 2. After the age distributions were examined, it was determined that those diagnosed as having conduct disorder and somatic symptom-related disorder during the pandemic period were older than those diagnosed during the pre-pandemic period ($p = .022$ and $p = .001$, respectively). It was also determined that those diagnosed as having mental retardation during the pandemic period were younger than those who presented during the pre-pandemic period ($p = .005$). The comparison of mental disorders with an increase/

Table 1. Differences between psychiatric disorders diagnosed according to pre-pandemic and pandemic period.

	Pre-pandemic n (%)	Pandemic n (%)	χ^2 (df)	p
ADHD	1648 (35%)	1110 (34.9%)	0 (1)	0.992
ASD	215 (4.5%)	124 (3.9%)	1.99 (1)	0.158
Anxiety Disorders	715 (15.1%)	510 (16%)	1.14 (1)	0.284
Affective disorders	382 (8.1%)	265 (8.3%)	0.145 (1)	0.703
Conduct disorder	166 (3.5%)	58 (1.8%)	19.7 (1)	<0.001*
Intellectual disability	441 (9.3%)	255 (8%)	4.15 (1)	0.042*
SLD	358 (7.6%)	137 (4.3%)	34.7 (1)	<0.001*
OCD	254 (5.3%)	266 (8.3%)	27.5 (1)	<0.001*
Tic disorder	58 (1.2%)	46 (1.4%)	0.69 (1)	0.405
Eating disorders	37 (0.7%)	36 (1.1%)	2.5 (1)	0.113
Psychosis	7 (0.1%)	4 (0.1%)	—	0.999**
SSRD	33 (0.7%)	62 (1.9%)	25 (1)	<0.001*
Other	394 (8.3%)	299 (9.4%)	2.64 (1)	0.104

Abbreviations ADHD: Attention-Deficit Hyperactivity Disorder ASD: Autism Spectrum Disorder SSRD: Somatic Symptom Related Disorder OCD: Obsessive-Compulsive Disorder SLD: Specific Learning Disorder n: Number * $p < .05$ **Fisher's Exact Test.

Table 2. Comparison of mental disorders with increase/decrease in the number of admissions before and after the pandemic in terms of sex.

	Boys n (%)	Girls n (%)	χ^2 (df)	<i>p</i>
Conduct disorder				
pre-pandemic	128 (77.1%)	38 (22.9%)	0.006 (1)	0.940
Pandemic	45 (77.5%)	13 (22.5%)		
ID				
pre-pandemic	270 (61.2%)	171 (38.8%)	2.05 (1)	0.151
Pandemic	170 (66.6%)	85 (33.4%)		
SLD				
pre-pandemic	230 (64.2%)	128 (35.8%)	3.23 (1)	0.072
Pandemic	76 (55.4%)	61 (44.6%)		
OCD				
pre-pandemic	115 (45.2%)	139 (54.8%)	4.08 (1)	0.043*
Pandemic	144 (54.1%)	122 (45.9%)		
SSRD				
pre-pandemic	16 (48.4%)	17 (51.6%)	12.816 (1)	<0.001*
Pandemic	9 (14.5%)	53 (85.5%)		

AbbreviationsID: Intellectual Disability SLD: Specific Learning Disorder OCD: Obsessive Compulsive Disorder.

Table 3. Comparison of mental disorders with increase/decrease in the number of admissions before and after the pandemic in terms of age.

	Pre-pandemic (median/IQR)	Pandemic (median/IQR)	<i>u/z</i>	<i>p</i>
Conduct disorder	8/5	9/3	3842.5/−2.2	0.022*
Intellectual disability	7/6	6/8	4906.5/−2.8	0.005*
Specific learning disorder	8/4	8/4	22439/−1.4	0.140
OCD	14/6	14/5	32948−0.4	0.624
SSRD	14/2	16/3	613.5/−3.2	0.001*

AbbreviationsOCD: Obsessive-Compulsive Disorder SSRD: Somatic Symptom-Related Disorder,**p* < .05.

decrease in the number of admissions before and after the pandemic in terms of age is presented in Table 3.

When the diagnostic distribution of the patients who presented to the outpatient clinic as the first admission was examined, it was found that, compared with the pre-pandemic period, the number of patients diagnosed as having anxiety, mood, and somatic symptom-related disorders increased ($p = .002$, $p = .001$, and $p = .043$, respectively). It was also determined that the number of patients diagnosed as having ADHD, conduct disorder, specific learning disability ($p = .031$, $p = .011$, and $p = .047$, respectively), and “other” problems decreased ($p = 0.03$). The diagnostic distribution of patients who were admitted to the outpatient clinic for the first time during the pre-pandemic period and the pandemic period is presented in Table 4. When the first admissions were compared in terms of age, it was found that the age during the pre-pandemic period (median: 8, IQR:7) was lower than during the pandemic period ($p < .001$, $u = 175,975$, $z = -3.77$). When compared in terms of sex, 439 (59.9%) of the first admissions during the pre-pandemic period were male and 293 were female

Table 4. Comparison of psychiatric disorders diagnosed in the first admissions before and during the pandemic.

	Pre-Pandemic n (%)	Pandemic n (%)	$\chi^2(df)$	<i>p</i>
ADHD	183 (25%)	109 (19.8%)	4.64 (1)	0.031*
ASD	18 (2.4%)	11 (2%)	0.28 (1)	0.591
Anxiety disorders	123 (16.8%)	131 (23.9%)	9.93 (1)	0.002*
Affective disorders	23 (3.1%)	39 (7.1%)	10.74 (1)	0.001*
Conduct disorder	36 (4.9%)	12 (2.1%)	6.46 (1)	0.011*
Intellectual disability	24 (3.2%)	24 (4.3%)	1.05 (1)	0.305
Specific learning disorder	43 (5.8%)	19 (3.4%)	3.94 (1)	0.047*
Obsessive compulsive disorder	33 (4.5%)	31 (5.6%)	0.87 (1)	0.351
Tic disorder	9 (1.2%)	8 (1.4%)	0.12 (1)	0.722
Eating disorders	3 (0.4%)	8 (1.4%)	—	0.064**
Psychosis	1 (0.1%)	2 (3%)	—	0.58**
SSRD	7 (0.9%)	13 (2.3%)	4.08 (1)	0.043*
Other	229 (31.2%)	141 (25.7%)	4.70 (1)	0.030*

Abbreviations ADHD: Attention-Deficit Hyperactivity Disorder ASD: Autism Spectrum Disorder SSRD: Somatic Symptom-Related Disorder n: Number **p* < .05 **Fisher's Exact Test.

(40.1%), and during the pandemic period, 258 (47%) of the first admissions were male and 290 (53%) were female. This difference was found to be statistically significant ($\chi^2 = 21, p < .001$).

Discussion

In this study, it was determined that there was a decrease in outpatient clinic admissions during the pandemic period compared with the pre-pandemic period. However, when the distribution of the admissions by months was examined, some differences were noticed. It was observed that the outpatient clinic admissions decreased significantly compared with 2019, especially in March, April, and May 2020, when the effects of the pandemic were first seen in Turkey. The closure of schools during this period, the closure measures that lasted until mid-May, and the high level of people's concerns about contagion related to COVID-19 may have decreased admissions. However, with the decrease in the number of cases and the abolition of closure measures in the summer months, it was noted that there was an increase in outpatient admissions, especially in August, compared with the previous year. It was noted that the fluctuation in the number of CAPOC admissions in the pre-pandemic period, which was accompanied by an increase with the opening of schools and a decrease in summer months, was not seen during the pandemic period. In the pandemic period from April 2020 until March 2021, admissions were in an increasing trend. When all these data were evaluated together, it was seen that the curfew, the closure of schools, and the increase and decrease in the number of COVID-19 cases affected the outpatient clinic admissions by month. In a study evaluating the admissions to child and adolescent mental health clinics in Ireland in 2018, 2019, and 2020, in the first 6 months of the pandemic, a significant decrease was observed in admissions compared with previous years. However, it was determined that admissions increased rapidly from September and reached a peak in November. It was also noted that the number of admissions in September, October, and November was higher than in previous years (McNicholas et al., 2021). Similar to the Irish sample, in this study, there was a decrease in child and adolescent

psychiatry outpatient clinic admissions during the first months of the pandemic. We observed that the number of child psychiatry admissions increased again when the number of reported COVID-19 cases decreased. The reason for the decrease in the number of outpatient admissions during the first months of the pandemic may be that families postponed their presentation to child psychiatry, rather than there being a decrease in the need.

Another striking point in the outpatient clinic admissions is that the median age of those (including the first admission and control) who were admitted during the pandemic period increased. During the COVID-19 pandemic, it has been reported that the mental health of older adolescents, girls, and those with any previous chronic disease has been more adversely affected (Samji et al., 2021). In a study conducted in Lithuania, 71% of adolescents reported that they had experienced psychosocial problems during the COVID-19 outbreak (Daniunaite et al., 2021). The increase in median age can be explained by the fact that adolescents needed more mental health support during the pandemic period.

In the current study, it was observed that the number of patients diagnosed as having anxiety disorder and mood disorder increased in the first admission and most of the admitted patients were female. In various studies, it was determined that anxiety and depression symptoms increased in children and adolescents during the pandemic period (Li et al., 2021; Magson et al., 2021; Racine et al., 2021; Samji et al., 2021). A study examining the impact of depressive and anxiety disorders during the COVID-19 pandemic in 2020 reported that the frequency of depressive and anxiety disorders increased and women and young people were more affected by depressive and anxiety disorders. One of the reasons for this situation was interpreted as the fact that women and young people were more affected by social isolation (Santomauro et al., 2021). Similar to the results of our study, a recently published meta-analysis found that the prevalence of depression and anxiety disorders in children and adolescents during the pandemic almost doubled compared with the pre-pandemic period. It has been reported that the prevalence rate is higher, especially in girls and older adolescents (Racine et al., 2021). It is known that the female sex is at risk for depression and anxiety disorders (Faravelli et al., 2013). However, beyond the predisposition due to sex, social isolation may have placed girls at a disadvantage in terms of mental disorders. Schools were closed on March 12th, 2020, the day after the first case of COVID-19 was detected in Turkey; subsequently, distance education was implemented due to the uncertainty and extensibility of the pandemic (Şeker et al., 2020).

During this period, when schools were closed for a long time, although children and adolescents could partially continue their educational activities with distance education, they were deprived of the social environment, teachers, and peer support that they would have had at school. In a review conducted by Panchal et al., the effect of closing schools on children's mental health was examined, and it was reported that anxiety and depression symptoms increased during this period. Also, it was reported that female sex, being an adolescent, being exposed to excessive information about COVID-19, loss of routine, having a previous mental health problem, having close relatives with COVID-19, and living in areas with high numbers of COVID-19 cases were risk factors for anxiety and mood disorders (Panchal et al., 2021). Similarly, Hawrilenko et al. reported that older children who received distance education experienced more mental problems than those who received face-to-face education (Hawrilenko et al., 2021). It can be interpreted that the increased number of young people diagnosed as having anxiety and depression in the first admissions due to various reasons such as the COVID-19 pandemic, long curfew, and transition to distance education has increased, and female adolescents are the most affected by this situation.

It has been determined that there are differences in the distribution of diagnoses during the pandemic period compared with the pre-pandemic period. In this study, an increase was found in

admissions due to OCD and somatic symptom-related disorders. Tanir et al. and Nissen et al. reported that during the COVID-19 pandemic, the symptoms of children diagnosed with OCD increased; however, Schwartz-Lifshitz et al. showed that the symptoms of children and adolescents diagnosed as having OCD in Israel during the first phase of the COVID-19 pandemic did not worsen (Nissen et al., 2020; Schwartz-Lifshitz et al., 2021; Tanir et al., 2020). In the current study, although it was found that the number of patients who were diagnosed as having OCD during the pandemic period was higher than that during the pre-pandemic period, regarding the first admissions, it was noted that there was no difference in the number of patients diagnosed as having OCD between the pre-pandemic and post-pandemic periods. This can be interpreted as that the symptoms of children and young people diagnosed with OCD increased during the pandemic period, but the pandemic itself did not trigger OCD.

Lopez Serrano et al. reported that somatic problems, anxiety, and expression problems increased in children and adolescents during the quarantine period in Spain (Lopez-Serrano et al., 2021). In a study conducted with adults in China, somatic symptoms increased in the general population during the COVID-19 epidemic. In particular, anxiety and sleep problems were associated with somatic symptoms (Huang et al., 2020). Similarly, in the current study, it was found that the number of patients who were diagnosed as having somatic symptom-related disorder increased both in total admissions and first admissions. Increased anxiety and depression symptoms in children and adolescents during the COVID-19 pandemic may be the source of admissions due to increased somatic symptom-related disorder.

In this study, it was also determined that the admissions of children and adolescents diagnosed with intellectual disability, specific learning disability, and conduct disorder decreased. It was thought that these admissions may have decreased due to the closure of schools. Similarly, it was determined that the number of children and adolescents diagnosed as having ADHD at the first admission decreased significantly. Young people diagnosed with ADHD who were deprived of teacher observation and did not engage in regular educational activities might not have been noticed during this process, or families could have found it unnecessary to present to the clinic due to attention problems because the schools were closed. This may have caused children and adolescents who started school with ADHD symptoms or whose ADHD symptoms became evident in the 2020-2021 academic year to be overlooked. Similarly, parents who wanted to present for developmental problems did not want to come to the hospital due to the risk of contamination, and therefore the number of first admissions may have decreased.

Another noteworthy feature in the results of the study is that the age of those who presented due to intellectual disability was lower than before the pandemic, and there was no change in the number of those diagnosed with intellectual disability when the first admissions were examined. This may be because children with intellectual problems who spend more time with their parents are noticed earlier and admissions were made at a younger age.

To the best of the researchers' knowledge, this study is one of the first studies in our county in which the admissions to a child and adolescent psychiatry outpatient clinic during the pandemic period are compared with those during previous periods. This study is a retrospective study, and it has several limitations related to this situation and may not be representative of the population. Patients who might need inpatient wards could have been referred even less to our outpatient clinic because there is no child psychiatry inpatient ward in our hospital. Additionally, emergency department and inpatient consultations were excluded from the study. The absence of an inpatient child-adolescent psychiatry ward in our hospital may have led to fewer referrals for patients with psychosis and bipolar affective disorder that may require hospitalization and may have caused the current results to not reflect the population. Also, in our study, we did not use standardized

assessments or structured interviews in the diagnostic process and the diagnoses were made only by clinical interview. This situation may have reduced the validity of the diagnoses.

During the first year of the pandemic, it was observed that the outpatient clinic admissions for child and adolescent psychiatry decreased compared with the previous year. However, there were also periods when admissions increased due to the decrease in the number of COVID-19 cases reported during the pandemic. Two of the most striking results of the study are that there was an increase in the median age of patients, and more female patients were admitted compared with the previous year. Additionally, differences were found in the diagnostic distributions between the pre-pandemic period and the pandemic period. During the pandemic period, the admissions made by patients with diagnoses such as conduct disorder, intellectual disability, and specific learning difficulties decreased, whereas there was an increase in admissions related to OCD and somatic symptom-related disorders. An increase in anxiety disorders, mood disorders, and somatic symptom-related disorders was observed in first admissions. Gaining an understanding of the effects of the COVID-19 pandemic on child psychiatry admissions will be beneficial for planning interventions to protect children's mental health.

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