# Are the illness severity and treatment efficacy of the patients followed in the child psychiatry inpatient service during the pandemic period different from the ''normal'' period?

*Pandemi döneminde çocuk psikiyatrisi yataklı servisinde izlenen hastaların hastalık şiddeti ve tedavi etkinliği "normal" dönemden farklı mı?*

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**SUMMARY**

**Objective:** COVID-19 pandemic poses a serious threat to health systems and inpatient treatment units. With the increase in the size of the pandemic, it has become a difficult process to carry out routine treatment services. In this study we aimed to compare the clinical profile, illness severity and length of hospitalization of the patients who were hospitalized in the child psychiatry inpatient service during the normal and the pandemic period. **Method:** The patients who were treated in the child psychiatry inpatient service during the the pandemic period (n=19), and previously normal period (n=149) were compared in terms of clinical profile, illness severity and length of hospitalization. Psychiatric diagnoses were assessed using the K-SADS-PL (Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version). The Clinical Global Impressions-Severity scale (CGI-S) was applied to all patients in both groups at hospitalization and discharge point. **Results:** We found that median level of CGI-S hospitalization scores in pandemic period was significantly higher than normal period. A significant negative correlation was found between CGI-S discharge scores and length of hospitalization during pandemic period. In addition, a significant difference was found between the groups in terms of the rate of anxiolytic drugs used. **Discussion:** Anxiety levels of people may increase in disasters such as pandemics, wars, earthquakes. During the pandemic period, patients with higher clinical severity of illness are treated in inpatient treatment units. In these cases, it is important to continue inpatient management without interruption, along with infection-preventive measures.

**Key Words:** Psychopathology, Mental health services, Child psychiatry, Pandemic

**ÖZET**

**Amaç:** COVID-19 pandemisi, sağlık sistemleri üzerinde ve yataklı servis tedavi birimleri üzerinde ciddi bir tehdit oluşturmaktadır. Pandeminin boyutunun artmasıyla birlikte rutin tedavi hizmetlerini yürütebilmek zorlu bir süreç haline gelmiştir. Bu çalışmada; çocuk psikiyatrisi yataklı servisinde salgın döneminde tedavi gören hastaların genel klinik profili, hastalık şiddetleri ve yatış süreleri ile pandemi öncesi dönemde tedavi gören hastaların karşılaştırılması amaçlanmıştır. **Yöntem:** Pandemi döneminde yataklı serviste tedavi gören 19 hasta ile daha önce yataklı servisimizde tedavi gören 149 hasta; hastalık şiddeti, klinik profil ve yatış süresi açısından karşılaştırılmıştır. Hastaların psikiyatrik değerlendirmesi için Okul Çağı Çocukları İçin Duygulanım Bozuklukları ve Şizofreni Görüşme Çizelgesi-Şimdi ve Yaşam Boyu Şekli (K-SADS) kullanılmıştır. Hastaların yatış sırasında ve taburculuk sonrasındaki hastalık şiddetleri, Klinik Global İzlenim Ölçeği-Şiddet (KGİÖ-Ş) ile değerlendirilmiştir. **Bulgular:** Salgın döneminde yatan hastaların KGİÖ-Ş yatış puanlarının medyan değeri, pandemi öncesi döneme göre yatan hastalardan istatistiksel olarak anlamlı şekilde yüksek çıkmıştır. Salgın döneminde yatan hastaların yatış süresiyle taburculuk KGİÖ-Ş arasında negatif korelasyon ilişkisi saptanmıştır. Ayrıca, iki grup arasında anksiyolitik ilaç kullanım oranı açısından istatistiksel olarak anlamlı bir farklılık saptanmıştır. **Sonuç:** Salgın, afet, savaş gibi büyük toplum kesimlerini etkileyen olaylarda kişilerin kaygı düzeyleri artabilmektedir. Pandemi döneminde yataklı servis tedavi birimlerinde, daha yüksek klinik şiddete sahip hastalar tedavi görmektedir. Bu durumlarda, enfeksiyondan koruyucu önlemlerle beraber yataklı servis yönetimine ara vermeden devam etmek önemlidir.

**Anahtar Sözcükler:** Psikopatoloji, Ruh sağlığı hizmetleri, Çocuk psikiyatrisi, Pandemi

*(Turkish J Clinical Psychiatry 2022;25:168-176)*
*DOI: 10.5505/kpd.2022.46872*


The arrival date of article: 01.05.2021, Acceptance date publication: 03.11.2021

## INTRODUCTION

Pandemics remain a threat to human health and healthcare management. The new Coronavirus hazard, which started in December 2019 and whose impact gradually increased in the first months of 2020, has been named COVID-19 by the World Health Organization and later declared as a global epidemic or pandemic in March 2020 (1). According to the analysis of the Chinese Center for Disease Control and Prevention on 44,500 patients, 87% of the patients are between 30 and 79 years old (2). In Italy, where the pandemic was most affected in Europe, the average age of those who lost their lives was 81, and more than two-thirds of these patients had comorbid conditions such as cardiovascular diseases, diabetes mellitus, or cancer (3). Although it has been stated that the incidence of symptomatic infection in childhood is very low and it is usually passed as a mild infection, cases with a severe infection have also been reported (4).

So far, over 3 million cases have been reported globally and are continuing to be reported on all continents except Antarctica. The vast majority of cases occur in family or business areas, and social organizations where close contact is common (5). Together with its high spreading rate, it creates a burden on all small or large-scale health institutions of the countries. Especially, in long-term care centers, cargo ships, and hospitals, where many people work and personal protective equipment is not used properly, secondary infections can occur (6). In all departments where inpatient treatment is given, it is necessary to take measures to prevent the spread of the pandemic and to make changes in functioning in order to continue the treatment of patients.

In the psychiatric inpatient services, besides the medication applied for psychopathology, milieu therapy, group activities, and social activities are of great importance. Among the precautions to be taken to prevent the spread of the outbreak, there are studies stating that such activities should be canceled and attention should be paid to social isolation rules, in psychiatric clinics (10). There are a few studies on the anxiety problems caused by Covid-19 outbreak in the literature; its effect on psychiatry and its impact on the management of patients in need of treatment in the field of mental health (11,12). In a study conducted in Germany to investigate the mental health burden of the society during the Covid-19 pandemic, it was shown that the prevalence of generalized anxiety symptoms and depression symptoms increased (13). But acute medical concerns and quarantine measures related to COVID-19 are causing delays in patients seeking psychiatric care (14).

The first case of COVID-19 in Turkey was announced by the Ministry of Health on March 11, 2020. Ege University Medical Faculty Hospital, to which we are affiliated as the Department of Child & Adolescent Psychiatry, has been declared a pandemic hospital with the published circular (15). Our clinic has been the only operating inpatient service during Mar 2020 – May 2020 among child psychiatry inpatient services located in the Aegean region. Furthermore, it has been the only university hospital that works as a child and adolescent psychiatry inpatient service during the pandemic in the country. In this period, in addition to the service functioning which has been revised suitable for the pandemic hospital, it was purposed to continue the treatment of inpatient child and adolescent patients. It has been observed that there is a need to compare patient characteristics in child and adolescent psychiatric services with the profiles of patients hospitalized during the pandemic.

In this study, the primary objective is to compare illness severity and length of stay between the normal period and the pandemic period. Secondary, to examine to clinic profile and family psychopathologies of patients. Thirdly, to evaluate the contribution of hospitalization treatment on recovery.

## METHOD

### Inpatient Service Functioning During The Covid-19 Pandemic

Ege University Faculty of Medicine Child and Adolescent Psychiatry Inpatient Service is a clinic with a capacity of 9 beds where children and adolescents aged under 18 years old are monitored and treated. Patients diagnosed except with substance

use disorder are hospitalized together with a mother or female companion. After the announcement of Ege University Medical Faculty Hospital as a pandemic hospital, some changes have been made in the functioning of the inpatient service. Due to the fact that our university has been declared a pandemic hospital and switched to a rotational work program, it has been planned to discharge patients who are worried about the pandemic environment or have no longer indication for hospitalization, considering that quarantine at home would be a better option for them. Inpatient treatment has been continued for patients whose discharge is not suitable. The double patient rooms in our service have been converted into single rooms, and the maximum number has been set as 5 for followed-up inpatients during this period (16).

**Sample**

Before the pandemic period between March 2013 and September 2014, 149 patients who have been hospitalized and discharged at the Ege University Child and Adolescent Psychiatry Inpatient Service, and 19 patients who were treated and discharged from our service in the period before June 2020 (March 2020-May 2020) when the inpatient service was temporarily suspended have been evaluated. The patient files were reviewed retrospectively and the data including demographic and clinical variables planned to be presented in this study were recorded in the forms created by the authors.

**Study Design and Procedure**

The information about the cases were evaluated using the data form created by the authors, in terms of age, gender, length of stay, diagnosis, medications, and Clinical Global Impression Scale-Severity (CGI-S) scores of hospitalization and discharge. The diagnoses of the cases were made by structured clinical interview. Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version; K-SADS have been used for patients with suitable ages (17,18).

**Materials**

***Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL):*** This diagnostic tool is a semi-structured interview form developed by Kaufmann et al. (17) in 1997 and used to detect psychopathologies in children and adolescents according to DSM-IV-TR criteria. The validity and reliability study into the Turkish version was performed in 2004 (18). K-SADS-PL has been performed to all patients over 6 years old in the service.

***The Clinical Global Impressions-Severity scale (CGI-S):*** The CGI-S represents a subjective judgment of illness severity at a specific point. It is rated on a seven-point Likert-type scale ranging from 1 (normal, not ill at all) to 7 (extremely ill). It is based on the clinician's assessment and it is used to designate the global severity of illness at a given point in time (19). This form has been applied to all patients in the service at hospitalization and discharge.

**Statistical Analysis**

The resulting data have been transferred to SPSS (The Statistical Package for Social Sciences) 22.0 database and performed using SPSS 22.0 program. Quantitative variables have been evaluated by the Kolmogorov-Smirnov test in terms of appropriateness for normal distribution. If normally distributed, the groups have been compared with two independent sample t-tests while they have been evaluated by the Mann Whitney-U test if not. Descriptive statistics of quantitative variables have been shown as the mean ± standard deviation and descriptive statistics of these variables were expressed as a frequency (%). Also, statistics of quantitative variables have been shown as the median (25th-75th percentile) if not normally distributed. A p-value of less than 0.05 was considered statistically significant. A comparison of categorical variables has been checked using chi-square analysis. The relationship between quantitative variables has been studied by Spearman and Pearson correlation analysis.

## RESULTS

### Descriptive Characteristics

Of the cases who received inpatient treatment before the pandemic period in the Ege University Child and Adolescent Psychiatry Inpatıent Service, 55 (36.9%) of them were boys and 94 (63.1%) were girls. The mean age of the girls and boys were 14.54 ± 2.88 and 13.62 ± 2.78 years, respectively. The gender distribution of 19 patients treated during pandemic was 63.2% girls and 36.8% boys; and the mean age of the girls and the boys are 14.57 ± 3.50 and 14.66 ± 2.83 years. There was no significant difference in terms of gender and age between the groups (p>0.05). In the normal period, of the inpatients 24.2% (n=36) did not attend to school, 36.9% (n=55) high school, 2.0% (n=3) open high school, 23.5% secondary school, 8.1% (n=12) primary school, and 2.7% (n=4) were special education students. During pandemic, 21.1% (n=4) of the inpatients did not attend school, while 42.1% (n=8) high school, 15.8% (n=3) secondary school, 5.3% (n=1) primary school, 10.5% (n=2) open high school and 5.3% (n=1) were special education students. In terms of the parental psychopathology of the cases; 24.2% (n=36) of the mothers and 7.4% (n=11) of the fathers had psychopathology in the normal period. During the pandemic period, the rates were 31.6% (n=6) and 21.1% (n=4), respectively. The difference of the presence of mother and father psychopathology was significant between the groups (p <0.05). The suicide attempt was 28.9% (n=43) during the normal period and 21% (4) during the pandemic period. Before the pandemic 36% (n=34) of girls and 16% (n=9) of boys attempted suicide among the inpatient group. During the pandemic these rates were 16% (n=2) of girls and 28% (n=2) of boys. No significant difference was found between the groups in terms of suicide attempt. Sociodemographic and clinical data of patients are presented in the Table 1.

**Table 1.** Comparison of sociodemographic and clinical data of patients between the two groups

| Categories | Normal Period | Pandemic Period | Test |
|---|---|---|---|
| **Gender n (%)** | Girl: 94 (63.1)<br>Boy: 55 (36.9) | Girl: 12 (63.2)<br>Boy: 7 (36.8) | ns |
| **Age Average mean–sd** | Girl: 14.5 (±2,88)<br>Boy: 13.6(±2,78) | Girl: 14.66 (±2,53)<br>Boy 14.57(±3,50) | ns |
| **Education Level n(%)** | Did not attend school 36 (24.2)<br>Special education 4 (2.7)<br>Primary school 12 (8.1)<br>Secondary school 35 (23.5)<br>High school 55 (36.9)<br>Open high school 3 (2.0) | Did not attend school 4 (21.1)<br>Special education 1 (5.3)<br>Primary school 1 (5.3)<br>Secondary school 3 (15.8)<br>High school 8 (42.1)<br>Open high school 2 (10.5) | ns |
| **Mother Psychopathology n(%)** | 36 (24.2) | 6 (31.6) | χ2: 12.034 df: 2 **p<0.05** |
| **Father Psychopathology n(%)** | 11 (7.4) | 4 (21.1) | χ2: 14.150 df: 2 **p<0.05** |
| **Suicide Attempt n (%)** | 43 (28.9)<br>Girl: 34 (36)<br>Boy: 9 (16) | 4 (21.1)<br>Girl: 2 (16)<br>Boy: 2 (28) | ns |

χ2 : Chi-square test; ns: Statistically non-significant

We examined the psychiatric diagnoses distributions. The most common diagnosis in both groups is mood disorders. Diagnosis rates before the pandemic were 57.7% (n=86) mood disorders (45.0% [n=67] major depressive disorder, 6.0% [n=9] bipolar disorder, 6.7% [n=10]) mood disorder not otherwise specified); 10.7% (n=16) attention deficit hyperactivity disorder (ADHD); 8.1% (n=12) schizophrenia and other psychotic disorders; 6.1% (n=9) autism spectrum disorder; 3.4% (n=5) conversion disorder; 4.7% (n=7) obsessive-compulsive disorder; 2.7% (n=4) conduct disorder; 1.3% (n=2) eating disorders. In pandemic period, 42.1% (n=8) mood disorders (31.6% [n=6] bipolar disorder, 10.5% [n=2] major depressive disorder); 21.1% (n=4) schizophrenia and other psychotic disorders; 15.8% (n=3) eating disorders; 10.5% (n=2) attention deficit hyperactivity disorder (ADHD); 10.5% (n=2) autism spectrum disorder were found. While the comorbid disorders during the normal period were 14.8% (n=22) conduct disorder, 13.4% (n=20) ADHD, 5.4% (n=8) intellectual disability, and 2.7% (n=4) major depressive disorder; during pandemic period the rates were 21.1% (n=4) ADHD, 15.8% (n=3) conduct disorder, 10.5% (n=2) intellectual disability, 10.5% (n=2) social anxiety disorder, 10.5% (n=2) obsessive-compulsive disorder and 5.3% (n=1) major depressive disorder (Table 2).

The psychotropic medication has been used in all patients undergoing inpatient treatment in both periods. The most commonly used psychopharma-

**Table 2.** Diagnostic rates of the both periods

| Primary Diagnoses n (%) | Normal Period | Pandemic Period |
|---|---|---|
| Mood disorders | BPD: 9 (6)<br>MDD:67 (45)<br>MD-NOS:10(6.7) | BPD: 6 (31.6)<br>MDD: 2 (10.5) |
| Psychotic disorders | 12 (8.1) | 4 (21.1) |
| Autism spectrum disorders | 9 (6.1) | 2 (10.5) |
| Eating disorders | 2 (1.3) | 3 (15.8) |
| Attention-deficit/hyperactivity disorder | 16 (10.7) | 2 (10.5) |
| Obsessive-compulsive disorder | 7 (4.7) | |
| Conduct disorder | 4 (2.7) | |
| Conversion disorder | 5 (3.4) | |
| **Comorbid Diagnoses n (%)** | | |
| Attention-deficit/hyperactivity disorder | 20 (13.4) | 4(21.1) |
| Conduct disorder | 22 (14.8) | 3 (15.8) |
| Intellectual disability | 8 (5.4) | 2 (10.5) |
| Major depressive disorder | 4 (2.7) | 1 (5.3) |
| Obsessive-compulsive disorder | | 2 (10.5) |
| Social anxiety disorder | | 2 (10.5) |

Note. BPD: Bipolar Disorder; MDD: Major Depressive Disorder; MD-NOS: Mood disorder not otherwise specified

cological agent group is antipsychotics. The frequency of psychopharmacological agents in inpatient service in the normal period was 91.6% (n=99) antipsychotics, 65.7% (n=71) antidepressants, 16.6% (n=18) stimulants, 13.8% (n=15) mood stabilizers and 12.9% (n=14) anxiolytics. During the pandemic period 100% (n=19) antipsychotics, 73.6% (n=14) anxiolytics, 63.3% (n=12) antidepressants, 21.1% (n=4) stimulants and 15.9% (n=3) mood stabilizers were used for treatment. It was observed that aripiprazole was the most used antipsychotic in the normal period with 51.8% (n=56). Whereas, risperidone was commonly used (68.4%, n=13) in the pandemic group. Compared to the normal period, the use of olanzapine during the pandemic has increased significantly ($x^2$ = 13.596; df = 1; p < 0.001). In the antidepressant group, sertraline and escitalopram were most frequently used in both periods. Lastly, anxiolytics use in the pandemic group was significantly higher ($x^2$ = 34.744; df = 1; p < 0.001; Table 3).

## Comparison the Length of Stay and CGI-S Scores

The median level of the length of stay in the normal period was 21 (10 - 36) days and in the pandemic group was 23 (8 – 38.75). On the other hand, 149 patients before the pandemic and 19 patients during the pandemic period have been evaluated for CGI-S during hospitalization. The median CGI-S

**Table 3.** Groups of psychopharmacological agents used in patients who were in the normal period and during the pandemic period

| Categories n (%) | Normal Period | Pandemic Period | Test | |
|---|---|---|---|---|
| **Antipsychotics** | 99(91.6) | 19 (100) | ns | |
| Risperidone | 54 (50) | 13 (68.4) | | |
| Aripipirazole | 56 (51.8) | 8 (42.1) | | |
| Olanzapine | 20 (18.5) | 9(47.4) | $\chi2$= 13.596 | df = 1 |
| **Antidepressants** | 71 (65.7) | 11 (64.7) | ns | |
| Sertraline | 34 (31.5) | 6 (31.6) | | |
| Escitalopram | 21 (19.4) | 6 (31.6) | | |
| Citalopram | 10 (9.2) | 2 (10.5) | | |
| **Stimulants** | 18 (16.6) | 4 (21.1) | ns | |
| **Mood stabilisers** | 15 (13.8) | 3 (15.9) | ns | |
| **Anxiolytics** | 14 (12.9) | 14 (73.6) | $\chi2$ = 34.744 | df = 1 |

$\chi2$ : Chi-square test; ns: Statistically non-significant

score was 5 (4 - 6) and 6 (5 - 7) during the hospitalization, and during the discharge was 3 (2 - 4) and 3 (3 – 4) in normal and pandemic group respectively. The comparison of CGI-S scores during the hospitalization and discharge was significantly different in both group (p<0.001). We have also investigated the relationship between median score of CGI-S during hospitalization/discharge and length of stay. There is no significant difference in CGI-S scores of discharge. However, the CGI-S scores of hospitalization in the pandemic period was signifi-

**Table 4.** Comparison of the CGI-S scores and length of stay between the both periods

| | Normal Period | | | Pandemic Period | | | Z score* | p value |
|---|---|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD | | |
| **CGI-S hospitalization** | 149 | 4,91 | 0,95 | 19 | 6,00 | 0,88 | -4,224 | **<0,001** |
| **CGI-S discharge** | 149 | 3,10 | 0,97 | 14 | 3,35 | 0,63 | -1,255 | =0,210 |
| **Length of stay** | 149 | 24,4 | 16,5 | 14 | 26,4 | 19,1 | -0,302 | =0,763 |

*, Mann-Whitney Test; CGI-S: Clinical Global Impression-Severity

cantly higher than the normal period (p<0.001). No significant difference was found between the two groups in terms of length of stay (Table 4).

## Correlation Between CGI-S Scores of Discharge and Length of Stay

When we have examined the correlation between CGI-S discharge scores and length of stay in both

**Table 5.** Correlation between CGI-S scores of discharge and length of stay

| | Normal Period | | Pandemic Period | |
|---|---|---|---|---|
| | r (correlation coefficient) | P (Spearman S rho) | r (correlation coefficient) | P (Spearman S rho) |
| Correlation analysis between CGI -S scores of discharge and length of stay | -0,071 | 0,390 | -0,622 | **<0,005** |

CGI-S: Clinical Global Impression-Severity

groups, a significant negative correlation was detected in the pandemic period. It was observed that the CGI-S discharge scores decreased as the length of stay increased (Table 5).

## DISCUSSION

In this study; we compared the severity of illness and hospitalization duration of the inpatient child and adolescent psychiatry cases between the normal period and pandemic period. Nineteen patients who have received treatment in inpatient service between March 2020 and May 2020 and 149 patients who were treated in inpatient service before the pandemic were compared. Additionally, the clinical profile of inpatients treated during the pandemic in the psychiatry service were presented.

In our study, a significant difference was found between the CGI-S hospitalization scores between the periods. The CGI-S hospitalization scores of the inpatients during the pandemic was significantly higher than the normal period. Patients were not accepted to the inpatient clinic except in emergency situations due to the pandemic hospital regulations. Therefore, children who were at high risk of self-destructive behavior and environmentally destructive behavior were hospitalized in the pandemic period. Besides that, being one of the three child & adolescent inpatient clinics in Turkey and the only university hospital which was open during the pandemic can explain the higher CGI-S scores. For this reason, the severity of illness stands out as a result of this study rather than variables such as gender and age.

There is a significant difference between the CGI-S hospitalization and discharge scores in both periods. This may indicate that patients benefit from inpatient service treatment in both periods. In addition, when we have examined the relationship between the hospitalization duration and the CGI-S scores of discharge, it was observed as the hospitalization duration increased, the CGI-S scores of discharge decreased. This can be considered as an effective continuation of the treatment processes during the pandemic period contributes to the recovery.

In both periods, girls were similarly dominant and there was no significant difference between the mean age. Studies show that girls are treated in psychiatric services more than boys during adolescence (20,21). A higher rate of psychiatric problems has been detected in mothers of patients than fathers. In relation, a recent study in 2019 has found that the maternal psychopathology of children and adolescent patients in inpatient service is greater than father psychopathology (22). The higher prevalence of psychopathology in the mother in our inpatient service may have been due to the fact that the psychopathological findings were noticed by the treatment team. Also, mothers of cases referred to adult psychiatry clinic within the hospitalization period.

No significant difference was found in terms of suicide attempt in the present study between the periods. When we search the literature, a study published in 2019 reports that up to 5-11% of boys and up to 29% of girls in adolescents treated in the inpatient clinic had attempted suicide history (23). In our study, the rate of suicide attempts in boys was higher than in girls during the pandemic period. This can be due to the limited number of cases and severely ill patient hospitalization during that period.

Mood disorders were the most common primary diagnosis in cases. Then, psychotic disorders and eating disorders follow. The most common accompanying diagnoses were the conduct disorder and attention deficit hyperactivity disorder. Consistent with our findings, there are similar rates with regards to diagnosis frequency in the studies (24,25). Although the rate of eating disorders is higher in our study than other studies, this may depend on the limited number of cases admitted for hospitalization during the pandemic process. At the same time, the fact that eating disorders are a group of diseases requiring multidisciplinary treatment, that our clinic has come forward in terms of many clinical studies and scientific experiences in eating disorders spectrum patients and that it is in a university hospital, so more patient referral from other units for the treatment of eating disorders may explain this result (26,27).

According to our study, antipsychotics and antidepressants were the most commonly used psychopharmacological agent groups in the treatment. Some of the studies indicate that they are the most common group in child psychiatry clinics (28,29). The cause of the more frequent choice of Olanzapine in the pandemic period may be in consequence of higher illness severity and the need for a combined medication, and rapid sedation. Especially in patients who were hospitalized during the early outbreak, we found that anxiolytics were used up to 70% of cases. This may have been caused by the treatment of patients with high illness severity compared to the previous period. Also, the high level of anxiety seen during epidemic periods may be another reason. In one study, anxiety levels in college students during the Covid-19 pandemic period is reported to be around 26% (30). Additionally, studies investigating the impact of fear and anxiety caused by epidemic periods on anxiety levels have been also included in the literature (31,32). In a study aiming to prospectively investigate the effect of the COVID-19 pandemic on adolescent anxiety, depressive symptoms and changes in life satisfaction; an increase in depressive symptoms, anxiety and a decrease in life satisfaction were found (33).

The main focus of our study is to compare the patient profile between both periods and to assess the illness severity. This study may have an original place in the literature in terms of comparing patient profile and disorder data from a periodic standpoint. While many psychiatric inpatient services were closed during the pandemic period, our department was one of the rare services where inpatient treatment continued. Therefore, we think that this study may be a guide to the studies to be carried out later.

Some limitations are important to note. Firstly, it has been done during the two-month stage of the pandemic period. For this reason, there has been a restriction in the number of cases. The limited number of hospitalizations during the pandemic period and the priority given to patients with high severity of illness in our inpatient service may explain the difference in CGI-S scores between the groups. Besides that, patients with different diagnoses are treated in our inpatient service. This can make it difficult to assess what may have been affected by the change in illness severity during hospitalization and discharge. This study has been conducted in a child and adolescent psychiatric clinic and is a cross-sectional study. Cross-sectional studies may only indicate psychiatric conditions over a certain time period and do not represent all clinical samples.

## CONCLUSION

In this study, clinical characteristics of the cases treated in the child and adolescent psychiatry inpatient service were compared between the normal period and the pandemic period. We found that patients with higher illness severity during the pandemic period were hospitalized, and patients benefited from inpatient treatment in both periods. In addition, we found that mood disorder was the most common diagnosis in both periods and psychiatric problems was found more frequently in the mothers of the patients than in their fathers.

The continuation of the psychiatric inpatient treatment services with infectious prevention measures in the field of child and adolescent during pandemic times has an important place. Clinical severity and profile of patients who are hospitalized during the pandemic may vary compared to normal period. In these cases, it is essential to provide therapeutic and preventive health services. Because the studies about the effect of the pandemic on the child and adolescent psychiatry inpatient services is limited, we believe that this study will be a premise and be supported by studies including a broad sample and a longer follow-up.

### ACKNOWLEDGEMENT

**Ethical statement:** The study was initiated with the approval of the Ege University Ethical Committee of Clinical Research (decision no: 20-5T/55).

**Informed consent:** Written informed consent for this study was obtained from patients and parents.

**Author contributions:** SK: Idea, Review, Draft Preparation BO: Idea, Review. ND: Literature Review,

Draft Preparation, Data Collection&Analyzing. IB: Literature Review, Draft Preparation, Data Collection. TB: Supervision.

**Conflict of interest:** The authors have no conflicts of interest.

**Financial support:** There is no financial support for this study.

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