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# ARAŞTIRMA MAKALESİ/RESEARCH ARTICLE

# **Evolving Psychiatric Needs of Children and Adolescents in A Global Health Crisis: A Study of Consultations During and After the COVID- 19 Pandemic**

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#### **Abstract**

**Objective:** Evidence is increasing that the COVID-19 pandemic and the social distancing measures implemented during this time have significantly affected the mental health of children and adolescents. This study aims to compare the sociodemographic characteristics of psychiatric consultation cases referred to child and adolescent mental health services during and after the pandemic, and to assess the impact of the pandemic on mental health and service utilisation in this population.

**Material and Method:** In this study, the demographic and clinical characteristics of psychiatric consultations for patients under the age of 18 referred to the Child and Adolescent Psychiatry Clinic of Samsun Training and Research Hospital were examined through a retrospective file review. The data were analysed by dividing them into three distinct time periods: the pandemic period (January 1, 2020 – July 1, 2021), the normalization period (July 1, 2021 – May 5, 2023), and the post-pandemic period (May 5, 2023 – December 31, 2023).

Results: In the post-pandemic period, a notable increase was observed in psychiatric consultations for children and adolescents. The average monthly number of consultations increased from 4.5 during the pandemic period, rose to 6.95 during the normalization period and to 22.13 in the post-pandemic period. Across the pandemic, normalization, and post-pandemic periods, the most common reason for child and adolescent psychiatric consultations was suicide attempt. Moreover, an upward trend in the average monthly number of suicide attempt-related consultations was observed during the normalization and post-pandemic periods.

Conclusion: This study highlights the changes in child and adolescent mental health during and after the COVID-19 pandemic, revealing notable differences in the number of psychiatric consultation referrals and diagnostic profiles. The findings indicate an increased demand for mental health services among children and adolescents in the post-pandemic period, with a marked rise in anxiety disorders and suicide attempts. These results suggest that the pandemic has had not only short-term but also long-lasting effects on child and adolescent mental health, underscoring the importance of continuity, accessibility and early intervention strategies in mental health services during similar societal crises.

Key Words: COVID-19 pandemic, psychiatric consultations, post-pandemic period, child and adolescent mental health

Küresel Bir Sağlık Krizi Sürecinde Çocuk ve Ergenlerin Değişen Psikiyatrik Gereksinimleri: COVID-19 Pandemisi Sırasında ve Sonrasında Yapılan Konsültasyonların İncelenmesi

#### Özet

Amaç: COVID-19 pandemisi ve bu süreçte uygulanan sosyal mesafe önlemlerinin, çocuk ve ergenlerin ruh sağlığı üzerinde önemli etkiler yarattığına dair kanıtlar giderek artmaktadır. Bu çalışmanın amacı; pandemi süreci ve sonrasındaki dönem boyunca çocuk ve ergen ruh sağlığı hizmetlerine yönlendirilen psikiyatrik konsültasyon vakalarının sosyodemografik özelliklerini karşılaştırmalı olarak analiz etmek ve pandemi sürecinin çocuk ve ergen ruh sağlığı ile sağlık hizmeti kullanımına yansıyan etkilerini değerlendirmektir.

Materyal ve Metot: Bu çalışmada, Samsun Eğitim ve Araştırma Hastanesi Çocuk ve Ergen Psikiyatrisi Kliniği'ne 18 yaş altı hastalar için yönlendirilen psikiyatrik konsültasyonlara ait demografik ve klinik özellikler, geriye dönük dosya taraması yöntemiyle incelenmiştir. Veriler; pandemi dönemi (1 Ocak 2020–1 Temmuz 2021), normalleşme dönemi (1 Temmuz 2021–5 Mayıs 2023) ve pandemi sonrası dönem (5 Mayıs 2023–31 Aralık 2023) olmak üzere üç farklı zaman aralığına ayrılarak değerlendirilmiştir.

**Bulgular:** Pandemi sonrası dönemde çocuk ve ergenlere yönelik psikiyatri konsültasyonlarında belirgin bir artış gözlemlenmiştir. Pandemi döneminde aylık ortalama 4.5 olan konsültasyon sayısı, normalleşme döneminde 6.95'e, pandemi sonrası dönemde ise 22.13'e yükselmiştir. Pandemi, normalleşme ve pandemi sonrası dönemlerde çocuk ve ergen psikiyatrisi konsültasyonlarının en yaygın başvuru nedeni intihar girişimi olarak belirlenmiştir. Bununla birlikte, normalleşme ve pandemi sonrası dönemlerde aylık ortalama intihar girişimi başvurularında artış eğilimi gözlenmiştir.

Sonuç: Bu çalışma, COVID-19 pandemisi sürecinde ve sonrasındaki dönemde çocuk ve ergen ruh sağlığı alanında yaşanan değişimleri ortaya koyarak, psikiyatrik konsültasyonlara yönelik başvuru sayılarında ve tanı profillerinde dikkat çekici farklılıklar olduğunu göstermiştir. Bulgular, pandemi sonrası dönemde çocuk ve ergenlerde ruh sağlığı hizmetlerine yönelimin arttığını ve özellikle anksiyete bozuklukları ile intihar girişimlerinde belirgin bir artış yaşandığını ortaya koymaktadır. Bu sonuçlar, pandeminin çocuk ve ergen ruh sağlığı üzerinde yalnızca kısa vadeli değil, uzun süreli etkiler bıraktığını göstermekte ve benzer toplumsal krizlerde sağlık hizmetlerinin sürekliliği, erişilebilirliği ve erken müdahale stratejilerinin önemi konusunda yol gösterici olmaktadır.

Anahtar kelimeler: COVID-19 pandemisi, psikiyatrik konsültasyonlar, pandemi sonrası dönem, çocuk ve ergen ruh sağlığı

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#### INTRODUCTION

Emerging in Wuhan, China in 2019 and rapidly developing into a global outbreak, Coronavirus Disease (COVID-19) led to the implementation of various public health measures worldwide due to its high transmissibility. In order to control the spread of the virus, a range of interventions such as full and partial lockdowns, travel restrictions, the suspension of in-person education, individual isolation, home quarantine, intensive medical surveillance. and social distancing introduced, causing profound changes in daily life. Although the COVID-19 pandemic has primarily been defined as a crisis threatening physical health, data from previous outbreaks indicate that such global health crises particularly measures aimed at limiting transmission can have both direct and indirect negative effects on mental health (1). These preventive measures have significantly disrupted the daily routines of children, adolescents, and families, leading to serious consequences for psychosocial functioning (2).

There is growing evidence of an increase in symptoms of depression and anxiety during the COVID-19 pandemic (3). While existing studies in the literature have primarily focused on specific high-risk groups such as adults and healthcare workers, there remains a need for more detailed examination of the psychosocial risks faced by children and adolescents, who are in a developmentally more vulnerable period. Indeed, social isolation and loneliness observed among children and adolescents during the pandemic have significantly increased the risk of developing depression and anxiety (4). The impact of COVID-19-related social restrictions on child and adolescent mental health has become a major topic of concern. In a comprehensive meta-analysis conducted by Racine et al., which included 29 cross-sectional studies, data from over 80,000 individuals revealed that 25.2% of children and 20.5% of adolescents reported clinically significant symptoms of depression and anxiety during the pandemic period (5). Therefore, it is of great importance to evaluate the effects of the COVID-

19 pandemic and the accompanying measures on child and adolescent mental health through a holistic approach. The findings obtained in this context will not only inform the current pandemic response but also contribute to the development of flexible and evidence-based intervention strategies that can be applied in future global crises. In assessing the mental health status of children and adolescents during and after the pandemic, the frequency and nature of psychiatric consultations are considered reliable indicators (6,7).

Current scientific evidence on the long-term effects of the COVID-19 pandemic on child and adolescent mental health remains limited, indicating a significant gap in knowledge, particularly for this developmentally sensitive age group (8). Although there are numerous studies in the literature examining the dynamics of child and adolescent mental health before and during the pandemic, research focusing on the post-pandemic period is still scarce (8).

The aim of this study is to comparatively examine the sociodemographic characteristics of psychiatric consultation cases referred to the child and adolescent psychiatry unit during and after the COVID-19 pandemic, and to assess the impact of the pandemic on mental health service utilisation among children and adolescents. Starting from January 2020, psychiatric consultations related to child and adolescent mental health were evaluated over time, based on

three distinct phases of the pandemic: the pandemic period, the normalization period, and the post-pandemic period as declared by the World Health Organization on May 5, 2023 (9). The main hypothesis of the study is that during the peak of the pandemic, healthcare utilization by children and adolescents would be delayed; however, factors such as social isolation, school closures, and increased family conflicts would adversely affect mental health, leading to a substantial rise in the need for psychiatric consultations in the post-pandemic period.

#### **MATERIALS AND METHODS**

The data for this study were obtained through a retrospective file review of psychiatric consultation records for patients under the age of 18 who were referred to the Child and Adolescent Psychiatry Clinic of Samsun Training and Research Hospital. Prior to the study, ethical approval was obtained from the Non-Invasive Clinical Research Ethics Committee of Samsun University (Decision No: SÜKAEK-2025/6/6, Date: 19.03.2025). The study was conducted in accordance with the principles of the Declaration of Helsinki.

The study was conducted within a time frame defined in parallel with the course of the COVID-19 pandemic in Türkiye. The research period began on January 1, 2020, including the period between January and March 2020 when preventive measures were implemented to block

the entry of the virus before the first official case was reported on March 11, 2020. This period extended through the post-pandemic phase following the World Health Organization's declaration of the end of the pandemic on May 5, 2023 (9), and continued until December 2023. This timeframe allowed for the evaluation of a four-year period encompassing the acute phase of the pandemic, the normalization process, and the post-pandemic period. July 2021 was taken as the reference point for the beginning of the normalization period (10).

Based on this historical framework, psychiatric consultations were categorized into three periods:

- Pandemic period: January 1, 2020 July 1, 2021
  (Group P)
- Normalization period: July 1, 2021 May 5, 2023 (Group N)
- Post-pandemic period: May 5, 2023 December
  31, 2023 (Group PP)

The data included in the analysis comprised patients' age, sex, physical chronic illness, the referring department, reason for referral, history of previous child and adolescent psychiatry

visits, whether psychiatric follow-up was initiated after the consultation, and the assigned psychiatric diagnoses. Psychiatric consultations conducted in the emergency department, outpatient clinics, and inpatient units were

included in the study. Diagnoses were made according to the criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychiatric Association (11). Follow-up consultations conducted for the same complaint as part of a previous assessment were excluded from the study.

IBM SPSS Statistics v26 (IBM Corporation, Armonk, NY, USA) was used for the statistical analysis. Continuous variables were summarised as mean ± standard deviation, and categorical variables were presented as frequency (n) and percentage (%). The Chi-square test was used to compare categorical variables between groups, while one-way analysis of variance (One-way ANOVA) was used for comparisons of continuous variables. When a significant difference was detected, Dunnett's post-hoc test was applied. A p-value of < 0.05 was considered statistically significant.

Prior to the study, the approval of Samsun University Non-Interventional Clinical Research Ethics Committee' numbered 2025/6/6 and dated 19.03.2025 was obtained.

### **RESULTS**

A total of 482 consultation records were reviewed, and 411 patient files that met the study criteria were included in the analysis. Of these patients, 81 were in Group P, 153 in Group N, and 177 in Group PP. When the groups were

compared by gender, Group P consisted of 68 (84%) females and 13 (16%) males; Group N included 134 (87.6%) females and 19 (12.4%) males; and Group PP had 111 (62.7%) females and 66 (37.3%) males. A statistically significant difference was found between the groups in terms of gender (p < 0.001). While no significant gender difference was observed between Group P and Group N (p = 0.44), a significant difference was found between Group P and Group PP (p < 0.001). Similarly, a significiant gender difference was observed between Group N and Group PP (p < 0.001). An increase in the proportion of male patients was observed in the post-pandemic period.

When the mean ages were examined, it was found to be  $14.90 \pm 1.75$  (min: 10, max: 17) in Group P,  $15.10 \pm 1.48$  (min: 12, max: 17) in Group N, and  $13.41 \pm 3.61$  (min: 2, max: 18) in Group PP. A statistically significant difference in age was observed between the groups (p < 0.001). While there was no significant age difference between Group P and Group N (p = 0.84), a significant difference was found between Group P and Group PP (p < 0.001). Similarly, a significant age difference was observed between Group N and Group PP (p < 0.001). A decrease in the average age of consultations was noted in the post-pandemic period.

When the groups were examined in terms of physical chronic illness, it was found that 6 patients (7.4%) in Group P had a chronic physical

illness, while 75 patients (92.6%) did not. In Group N, 70 patients (39.5%) had a chronic illness, and 107 patients (60.5%) did not. A statistically significant difference was found between the groups regarding the presence of chronic illness (p < 0.001). There appears to be a trend toward increased chronicity in consultations during the normalisation (Group N) and post-pandemic (Group PP) periods.

In the post-pandemic period, a marked increase was observed in psychiatric consultations for children and adolescents. The average monthly number of consultations was 4.5 in Group P, 6.95 in Group N, and 22.13 in Group PP. A statistically significant difference was found between the groups in terms of average monthly consultation numbers (p < 0.001).

When the groups were examined in terms of the referring departments, a statistically significant difference was found between the groups (p < 0.001). The distribution of referring departments is presented in Table 1. In all three groups, general pediatrics was the leading department requesting consultations. However, the number of consultations requested from the pediatric intensive care unit decreased in the normalization and post-pandemic periods compared to the pandemic period. Conversely, an increase in consultations from the pediatric endocrinology department was observed in the post-pandemic period.

**Table 1.** Distribution of the departments requesting children psychiatry consultation

	Group P	Group N	Group PP
	(n:81)	(n:153)	(n:177)
General	54	131	82
Pediatrics	66.7%	85.6%	46.3%
Department			
Pediatric	1	9	4
Emergency	1.2%	5.9%	2.3%
Department			
Pediatric	0	0	1
Infectious	0%	0%	0.6%
Diseases			
Department			
Pediatric	0	0	36
Endocrinology	0%	0%	20.3%
Department			
Pediatric	23	11	8
<b>Intensive Care</b>	28.4%	7.2%	4.5%
Unit			
Pediatric	0	0	7
Neurology	0%	0%	4.0%
Department			
Pediatric	0	0	4
Cardiology	0%	0%	2.3%
Department			
Pediatric	2	1	7
Surgery	2.5%	0.7%	4.0%
Department			
<b>Burn Care Unit</b>	0	0	10
	0%	0%	5.6%
Others	1	1	7
	1.2%	0.7%	4.0%
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Group P: Pandemic period group

Group N: Normalization period group

Group PP: Post-pandemic period group

When the groups were evaluated in terms of reasons for consultation requests, a statistically significant difference was found between the groups (p < 0.001). The distribution of consultation reasons is presented in Table 2. In all three groups, suicide attempt was identified as the leading reason for referral. A statistically

significant difference was also found between the groups regarding the average number of monthly suicide cases (p < 0.001). The average number of monthly suicide cases was 4.5 in Group P, 6.95 in Group N, and 6.63 in Group PP.

Table 2. The reason of the consultation

	Group P	Group N	Group PP
	(n:81)	(n:153)	(n:177)
Suicide attempt	81	153	53
	100%	100%	30.0%
Agitation	0	0	26
	0%	0%	14.7%
Nonadherence	0	0	22
to treatment	0%	0%	12.4%
Depressive	0	0	13
symptoms	0%	0%	7.3%
Anxiety	0	0	7
symptoms	0%	0%	4.0%
Alcohol or	0	0	14
substance abuse	0%	0%	7.9%
Others	0	0	42
	0%	0%	23.7%

Group P: Pandemic period group

Group N: Normalization period group

Group PP: Post-pandemic period group

When the groups were evaluated in terms of psychiatric diagnoses, a statistically significant difference was found between them (p < 0.001). The psychiatric diagnoses are presented in Table 3. In Groups P and N, the most frequently assigned diagnoses were attentiondisorder deficit/hyperactivity (ADHD), depression, and anxiety disorders, respectively. In Group PP, the most common diagnoses were anxiety disorders, followed by ADHD and depression.

**Table 3.** The distribution of the diagnoses

	Group P	Group N	Group PP
	(n:81)	(n: 153)	(n: 177)
Attention-Deficit/	34	47	37
Hyperactivity	42.0%	30.7%	7.9%
Disorder			
Depression	24	41	24
	29.6%	26.8%	13.6%
Anxiety disorders	12	27	45
	14.8%	17.6%	25.4%
Adjustment	1	4	19
Disorders	1.2%	2.6%	10.7%
Acute and Post-	0	2	3
<b>Traumatic Stress</b>	0%	1.3%	1.7%
Disorder			
<b>Conduct Disorder</b>	4	6	11
	4.9%	3.9%	6.2%
Intellectual	0	0	4
Disability	0%	0%	2.3%
<b>Substance Use</b>	1	4	8
Disorder	1.2%	2.6%	4.5%
Obsessive-	0	2	1
Compulsive	0%	1.3%	0.6%
Disorder			
Bipolar related	1	1	2
disorders	1.2%	0.7%	1.1%
Specific learning	1	0	0
disorders	1.2%	0%	0%
Eating disorders	0	0	4
	0%	0%	2.3%
Others	3	19	14
	3.7%	12.4%	7.9%

Group P: Pandemic period group

Group N: Normalization period group

Group PP: Post-pandemic period group

No statistically significant difference was found between the groups regarding prior use of child and adolescent psychiatry services before the consultation (p = 0.12). However, a statistically significant difference was identified between the groups in terms of referral rates to the child and adolescent psychiatry outpatient clinic following the consultation (p < 0.001). There was no

significant difference between Group P and Group N in post-consultation outpatient follow-up rates (p = 0.06). In contrast, significant differences were found between Group P and Group PP (p < 0.001), and between Group N and Group PP (p < 0.001). Following the consultation, referrals to the child and adolescent psychiatry outpatient clinic were observed in 64 patients (79%) in Group P, 104 patients (68%) in Group N, and 97 patients (54.8%) in Group PP, while the number of patients not referred was 14 (21%), 43 (32%), and 80 (45.2%) respectively.

#### **DISCUSSION**

In this study, an overall upward trend was observed in psychiatric consultations for children and adolescents during the post-pandemic period. This finding is consistent with previous studies reporting an increase in mental health service utilisation among adolescents in the aftermath of the COVID-19 pandemic (8). In examining the course of psychiatric consultations across different phases of the pandemic, a noticeable decline was observed during the early stages when strict restrictions were in place; this was followed by a rise in later stages as these restrictions were eased. This is likely due to the accumulation of unmet needs. Similarly, in a general hospital in Italy, psychiatric consultations decreased by 42.9% during the full lockdown period and by 19.5% during periods of partial restrictions (12). In line with these findings, our study also demonstrated an increase in consultations during the normalisation period. These results suggest that, while initial disruption to access to mental health services was caused by the restrictions imposed during the pandemic, this subsequently translated into an increase in referrals once the restrictions were lifted.

It is well established that the COVID-19 pandemic has had negative effects on the living conditions and mental well-being of children and adolescents (13, 14). However, in our study found that the number of referrals observed during the pandemic period was found to be lower compared to the general trend in the postpandemic period. This may be associated with changes in help-seeking behavior and limited access to healthcare services during the pandemic. Additionally, the calmer living conditions and increased parental supervision that emerged during the pandemic may have contributed to a reduced need for mental health service utilisation. During the pandemic, in an effort to control the spread of the virus, many healthcare services were either significantly reorganised or temporarily suspended (15).

In this study, the increasing rates of psychiatric consultations and suicide attempts over time may indicate delays or postponement in help-seeking behavior among children and adolescents. Similar findings regarding changes in suicide attempts among this population have been

reported in recent studies (16, 17). of this increase underlying causes are multifaceted may include and children's heightened sensitivity to the restrictive pandemic-related measures, a deterioration in family health and economic conditions, increased screen time and social media use, and experiences of grief and loss. A study conducted during the early months of the COVID-19 quarantine across ten countries, involving children under the age of 18, found a decrease in the number of emergency department visits for mental health issues, while the rate of serious suicide attempts increased (16). This finding is consistent with the results of our study which suggest that many children were unable to access mental health services during the strict, quarantine phase of the pandemic. Therefore, it is crucial to develop community-based, mobile service models that can provide intensive psychiatric support and facilitate access during times of crisis to ensure continuity of care.

Similarly, a study conducted at a major pediatric center in France examining children aged 15 and under who presented with suicide attempts reported a temporary decrease during the initial lockdown. However, a significant rise in suicide attempts in this age group was observed toward the end of 2020 and the beginning of 2021 (17). This indicates that the increase cannot be explained solely by increased parental supervision; it also highlights the critical role of

limited access to emergency mental health services under pandemic conditions.

The pandemic experience has highlighted important lessons regarding the continuity and accessibility of mental health services. The present study, it is noteworthy that the primary reason for psychiatric consultations during the pandemic period was suicide, and the most frequently diagnosed condition was attentiondeficit/hyperactivity disorder. From the onset of pandemic, disruptions in face-to-face services negatively affected the continuity of psychiatric care, underscoring the need to restructure mental health policies to ensure service continuity during times of crisis. In this context, innovative approaches such as telepsychiatry and online psychosocial support lines have gained importance, particularly during periods of restriction (18).

Following the pandemic, a shift in the distribution of psychiatric diagnoses among referred patients was observed. In our study, ADHD, which was frequently diagnosed during the pandemic, was replaced by anxiety disorders as the most common diagnosis in the post-pandemic period. It is thought that increased uncertainty, health-related worries, and social isolation acted as stressors that triggered anxiety symptoms, contributing to the rise in consultation rates for these disorders after the pandemic.

There are several reasons to expect changes in depression and anxiety symptoms among

children and adolescents during the pandemic. Social isolation and quarantine measures implemented for children have been associated with nearly a fourfold increase in stress-related symptoms (2). Throughout the COVID-19 pandemic, numerous etiological factors that may contribute to psychopathology in children and adolescents either emerged or were exacerbated. These include increased screen time (19), disruptions and closures in education (20), cancellation of extracurricular activities (20), increased levels of loneliness (4), reduced physical activity (21), and limited access to school-based mental health services (22).

The findings suggest that mental health problems may persist beyond the pandemic and emphasize that the risk may increase further with prolonged mandatory isolation (4). Notably, the duration of loneliness has shown a stronger association with psychological symptoms than the intensity of loneliness itself (4). Therefore, strengthening preventive support mechanisms and early intervention strategies aimed at protecting the mental health of children and adolescents emerges as a key priority for healthcare services. Initial post-pandemic survey studies conducted in China reported a high prevalence of common mental health problems such as depression and anxiety (23). A similar trend was observed in our study, where anxiety disorders previously the third most frequent diagnosis during the pandemic and normalization periods became the

most common diagnosis in the post-pandemic period. This finding indicates that anxiety disorders have become more prominent among children and adolescents in the aftermath of the pandemic, with a greater impact reflected in mental health service utilisation. On the other hand, it is noteworthy that depression, which ranked second during the pandemic and normalisation periods, dropped to third place in the post-pandemic period. This shift suggests that the reasons for seeking mental health support and the ways in which psychological symptoms present may vary across different phases of the pandemic.

Numerous studies have shown a decline in mental health-related visits to pediatric emergency departments immediately following the pandemic (16, 24). This decline may be associated with factors such as quarantine measures and school closures (16). Additionally, subjective factors such as fear of infection potentially deterring individuals from seeking care at health facilities may also have contributed to this trend (25).

In our study, a notable increase in the number of mental health consultations requested by the pediatric endocrinology department was observed during the post-pandemic period. Restrictive measures implemented during the COVID-19 pandemic, such as school closures and stay-at-home orders, led to sudden and structural changes in children's daily routines.

During this time, the increased use of the internet and social media, reduced physical activity levels, and the emergence of unhealthy eating habits among children were reported (26). These factors may have contributed to the growing need for mental health consultations among pediatric endocrinology patients. Moreover, the findings of this study show that, in the post-pandemic period, consultations were requested not only by general pediatric clinics but also by various other departments. This indicates that mental health problems in children and adolescents after the pandemic require a multidisciplinary follow-up approach. It also highlights that the pandemic has affected both physical and mental health, emphasising the need for a comprehensive and integrated approach in healthcare service planning.

Consistent with the exsisting literature, this study observed a decrease in the average age of cases referred for psychiatric consultation during the post-pandemic period (8). This finding suggests that psychiatric symptoms may have become more apparent in younger children after the pandemic and that awareness of the mental health needs of this age group has increased. Additionally, an increase in teacher referrals during the return-to-school period may have facilitated access to mental health services for younger children.

The study by Marin et al, it was reported that the proportion of individuals with a personal

history post-pandemic psychiatric among referrals had decreased (8). In contrast, our study found no significant difference in the frequency of prior psychiatric referrals when comparing consultation cases from the pandemic and postpandemic periods. However, a noteworthy finding in our study was the significant decline in the proportion of patients who continued with follow-up at the child and adolescent psychiatry outpatient clinic during the post-pandemic period, compared to the pandemic normalisation periods. This decline in follow-up may not be solely due to a reduction in clinical need, but could also reflect a combination of factors such as access to healthcare services, help-seeking behaviors, systemic challenges, and changes in social perceptions. These findings highlight the need to restructure mental health services in the post-pandemic period and to develop models that specifically support continuity of care.

Our study has several limitations. Firstly, the research was conducted at a single center, which limits the generalisability of the findings to the broader child and adolescent population across the country. Additionally, the overrepresentation of female patients in the sample may have introduced a gender imbalance, restricting the generalizability of the results with respect to sex-based analyses. Moreover, the absence of a dedicated child and adolescent mental health emergency unit in the city where

the study was conducted led to the majority of psychiatric consultations being requested from non-emergency departments. This may have resulted in an underrepresentation of emergencybased consultations and limiting the scope of the data in this regard. Consequently, the findings may not be fully generalisability to healthcare settings without specialised pediatric facilities. While electronic health records offer the advantage of rapid access to patient data, they may not allow for comprehensive and detailed clinical assessments. Another limitation of the present study is its retrospective design. Furthermore, DSM-5 diagnoses were based exclusively on clinician reports, without the use of standardized structured interviews such as the Kiddie Schedule for Affective Disorders and Schizophrenia, which may limit the diagnostic reliability.

#### **CONCLUSION**

This study highlights the changes in psychiatric referrals for children consultation and adolescents the different phases of the COVID-19 pandemic. The findings indicate an increased need for psychiatric consultations in the postpandemic period, reflecting the impact of delayed help-seeking heightened and psychosocial stressors. The fact that anxiety disorders emerged as the most frequently diagnosed condition in the post-pandemic phase

underscores the long-term psychological effects of the pandemic.

Additionally, the rise in consultation requests from various clinical departments suggests that child and adolescent mental health should be addressed through a multidisciplinary approach. The observed increase in suicide attempts may reflect delays in help-seeking behavior and barriers in accessing mental health services. In this context, the need for accessible and continuous mental health care during times of crisis is once again emphasised. In conclusion, the effects of the pandemic on child and adolescent mental health are ongoing. To better prepare for similar future scenarios, it is essential to establish sustainable, integrated, and accessible mental health services.

**Ethics Committee Approval:** Prior to the study, the approval of Samsun University Non-Interventional Clinical Research Ethics Committee' numbered 2025/6/6 and dated 19.03.2025 was obtained.

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#### REFERENCES

- 1. Hossain MM, Sultana A, Purohit N. Mental health outcomes of quarantine and isolation for infection prevention: a systematic umbrella review of the global evidence. Epidemiol Health. 2020;42:e2020038.
- 2. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, Rubin GJ. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. 2020 Mar 14;395(10227):912-920.
- 3. Madigan S, Racine N, Vaillancourt T, et al. Changes in depression and anxiety among children and adolescents from before to during the COVID-19 pandemic: a systematic review and metaanalysis. JAMA Pediatr. 2023;177:567-581.
- 4. Loades ME, Chatburn E, Higson-Sweeney N, Reynolds S, Shafran R, Brigden A, et al. The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. J Am Acad Child Adolesc Psychiatry. 2020;59(11):1218-1239.e3.
- 5. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a

- metaanalysis. JAMA Pediatr. 2021;175(11):1142-1150.
- 6. Durak F, Tezol Ö, Güler Aksu G, Bozlu G. Evaluation of psychiatric consultations requested from pediatric clinics during the COVID-19 pandemic. J Pediatr Acad. 2025;6(2):55-61.
- 7. So P, Wierdsma AI, Mulder CL, Vermeiren RRJM. The impact of the COVID-19 pandemic on psychiatric emergency consultations in adolescents. BMC Psychol. 2023;11(1):101.
- 8. Marin D, Di Gennaro G, Baracetti M, Zanetti R, Balestrieri M, Cogo P, et al. Confirmation of increased and more severe adolescent mental health-related in-patient admissions in the COVID-19 pandemic aftermath: A 2-year follow-up study. Psychiatry Res Commun. 2023;3(2):100119.
- 9. Burki T. WHO ends the COVID-19 public health emergency. Lancet Respir Med. 2023;11(7):588.
- 10. Republic of Turkey, Ministry of Interior. Circular on gradual normalization measures sent to 81 provincial governorships. 27 June 2021 [in Turkish; self-translated by the author]. Available from: https://www.icisleri.gov.tr/81-il-valiligine-kademeli-normallesme-tedbirleri-genelgesi-gonderildi
- 11. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: APA; 2013.
- 12. Prina E, Marquis A, Tedeschi F, Rabbi L, Salazzari D, Ballarin M, et al. Effects of COVID-19 pandemic on psychiatric and psychological consultation-liaison contacts in a general hospital in North-East of Italy: a retrospective study. Front Psychiatry. 2024;15:1414248.

- 13. Jefsen OH, Rohde C, Nørremark B, Østergaard SD. COVID-19 pandemic-related psychopathology in children and adolescents with mental illness. J Child Psychol Psychiatry. 2020.
- 14. Jones EAK, Mitra AK, Bhuiyan AR. Impact of COVID-19 on mental health in adolescents: a systematic review. Int J Environ Res Public Health. 2021;18:2470.
- 15. Ornell F, Borelli WV, Benzano D, Schuch JB, Moura HF, Sordi AO, et al. The next pandemic: impact of COVID-19 in mental healthcare assistance in a nationwide epidemiological study. Lancet Reg Health Am. 2021.
- 16. Ougrin D, Wong BH, Vaezinejad M, Plener PL, Mehdi T, Romaniuk L, et al. Pandemic-related emergency psychiatric presentations for self-harm of children and adolescents in 10 countries (PREP-kids): a retrospective international cohort study. Eur Child Adolesc Psychiatry. 2022;31(7):1-13.
- 17. Cousien A, Acquaviva E, Kernéis S, Yazdanpanah Y, Delorme R. Temporal trends in suicide attempts among children in the decade before and during the COVID-19 pandemic in Paris, France. JAMA Netw Open. 2021;4(10):e2128611.
- 18. Tolou-Shams M, Folk J, Stuart B, Mangurian C, Fortuna L. Rapid creation of child telemental health services during COVID-19 to promote continued care for underserved children and families. Psychol Serv. 2022;19(Suppl 2):39-45.
- 19. Madigan S, Eirich R, Pador P, McArthur BA, Neville RD. Assessment of changes in child and adolescent screen time during the COVID-19 pandemic: a systematic review and metaanalysis. JAMA Pediatr. 2022;176(12):1188-1198.
- 20. Tsujimoto KC, Cost KT, LaForge-MacKenzie K, et al. School and learning

- contexts during the COVID-19 pandemic: implications for child and youth mental health. Curr Psychol. 2022;1-17.
- 21. Neville RD, Lakes KD, Hopkins WG, et al. Global changes in child and adolescent physical activity during the COVID-19 pandemic: a systematic review and metaanalysis. JAMA Pediatr. 2022;176(9):886-894.
- 22. Lee J. Mental health effects of school closures during COVID-19. Lancet Child Adolesc Health. 2020;4(6):421.
- 23. Zhou SJ, Zhang LG, Wang LL, Guo ZC, Wang JQ, Chen JC, et al. Psychological health problems in Chinese adolescents during the outbreak of COVID-19. Eur Child Adolesc Psychiatry. 2020;29:749–758.

- 24. Krass P, Dalton E, Doupnik SK, Esposito J. US pediatric emergency department visits for mental health conditions during the COVID-19 pandemic. JAMA Netw Open. 2021;4(4):e218533.
- 25. Raffaldi I, Castagno E, Fumi I, Bondone C, Ricceri F, Besenzon L, et al. Pediatric admissions to emergency departments of North-Western Italy during COVID-19 pandemic: a retrospective observational study. Lancet Reg Health Eur. 2021;5:100081.
- 26. Wang G, Zhang Y, Zhao J, Zhang J, Jiang F. Mitigate the effects of home confinement on children during the COVID-19 outbreak. Lancet. 2020;395:945–947.