An Analysis of Admissions to a Refugee Child Mental Health Unit in the Context of the COVID-19 Pandemic

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Abstract

Background: To examine the admissions to a refugee child outpatient mental health unit in the COVID-19 pandemic and to compare them with the pre-pandemic period.

Methods: This retrospective observational study, planned through the hospital information system and patient files, included the 1-year number of outpatient unit admissions, sociodemographic, and clinical data.

Results: Before the COVID-19 pandemic (March 2019–February 2020), a total of 2322 patients (local and refugee) applied to the same unit, and 236 (10.1%) of these patients were refugees. Since the commencement of the COVID-19 pandemic in Turkey (March 2020–February 2021), 1209 patients applied, and 10.4% (n = 126) of them were refugees. While 19.66 ± 6.31 refugees applied per month in the pre-pandemic period, this number decreased to 10.50 ± 5.31 during the pandemic period (p = 0.01). During the pandemic period, there was a significant decrease in the number of female refugee patient admissions. In addition, while admissions for external disorders increased significantly during the pandemic period ($χ^2 = 13.99, p = 0.001$), admissions for internal disorders decreased significantly ($χ^2 = 4.54, p = 0.03$).

Conclusions: The decrease in the mental health unit demands with the pandemic may lead to negative consequences in the long term. To determine mental health and psychological needs of patients during the outbreak will greatly contribute to the pandemic management process.

Keywords
COVID-19, refugee, child, mental health, ADHD, anxiety, pandemic

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Turkey hosts around 3.6 million refugees, of whom a significant portion is in the child and adolescent age range (United Nations High Commissioner for Refugees, 2020). Refugee children and adolescents are at risk in terms of susceptibility to mental illnesses. Many studies have shown that both internal problems such as anxiety and depression and external problems such as destructive behavioral disorders were commonly encountered in refugee children and adolescents (Çeri et al., 2018; Ünver et al., 2021). In addition to these mental difficulties, it is pointed out that the refugees were particularly vulnerable to the impact of coronavirus-19 (COVID-19) pandemic that affects the whole world (Kluge et al., 2020; Singh, 2020).

COVID-19 disease, which gave rise to the death of approximately 3 million people worldwide, still continues as a pandemic (World Health Organization, 2020). A wide range of psychiatric symptoms such as anxiety, anger, obsessive-compulsive symptoms, depression, and anorexia were observed in children and adolescents during the pandemic period (Cao et al., 2020; Jiao et al., 2020; Ünver et al., 2020; Wang et al., 2020). Even the situation is worse for refugee children. Considering the situations such as crowded living conditions, hygiene problems, lack of nutrition, lack of education, economic difficulties, and inability to access healthcare services, refugees may end up with more negative outcomes during the pandemic (Kluge et al., 2020; Singh, 2020). The interruption of the psychiatric treatment of refugee patients due to the pandemic may trigger the existing traumatic stress situations especially in patients with prior traumatic stress symptoms (Browne et al., 2021). Additionally, pandemic-related restrictions such as lockdown, quarantine, and physical isolation may trigger the symptoms of post-traumatic stress disorder in this particular group (Brickhill-Atkinson & Hauck, 2021). The difficulties they experience before and after migration, namely, unemployment, racism, language barrier, and difficulties in accessing resources may complicate their coping process during the pandemic and they may be more negatively affected than the rest of the individuals in the community. In addition, the restriction measures may cause them to be re-traumatized by reminding them previous unfavorable experiences in their own countries (Junior et al., 2020).

During the worldwide home quarantine periods, demands to child and adolescent mental health outpatient clinics have decreased (de Neira et al., 2020; Guessoum et al., 2020). In a study, it was stated that the decrease in psychiatric admissions in some age groups was 44.6%. Clinicians have expressed concern about timely access to psychiatric clinics for children and youth, noting a sharp decline in referrals to Child and Adolescent Mental Health Services in the UK (Delgado-Newlove et al., 2021). Several reasons can be stated. First, many of the health professionals began to work in pandemic clinics and as a mitigation strategy number of appointments were decreased. Second, many individuals were scared of contagion with COVID-19 and therefore reluctant to visit hospitals. The last, but not the least, individuals might be more prone to prioritize physical health needs compared to mental health needs. The social focus on preventing COVID-19 transmission and physical well-being may have reduced attention to psychiatric symptoms. However, such a decrease in treatment seeking especially in the early periods of the pandemic leads to a variety of unfavorable psychiatric outcomes in the long term. Furthermore, refugee individuals had more challenges in accessing healthcare services during the pandemic (Orcutt et al., 2020). Pandemic-related healthcare measures and warnings were planned by the governments especially for refugees those living in camps; however, the data regarding those living in the cities were incomplete, and there was even no available data regarding their access to healthcare services in this particular period (Kluge et al., 2020; Singh, 2020). Despite the potential major impact on refugee children mental health, there is
comparatively less literature about the impact of COVID-19 on both the mental health and the demand for psychiatry services in refugees (Browne et al., 2021).

In this preliminary study, it is aimed to examine the admissions to the refugee child mental health outpatient unit during the COVID-19 pandemic and compare them with those within the last 1-year time interval in the pre-pandemic period and contribute to the literature with the data discussed. The absence of notification of any study about refugee children psychiatric admissions in COVID-19 pandemic makes this study unique and also the data about refugee children may give priority to other studies in this field.

Methods

Information about the unit, data collection, and sample

The Refugee Child Mental Health Unit has been serving within the Marmara University Pendik Research and Training Hospital Child and Adolescent Psychiatry Outpatient Clinic in Istanbul province since 2017. Patients apply to the hospital with the IDs given to them by the Provincial Immigration Administration. Interviews are conducted in Arabic in the presence of translators. If there is a request for interviews with Turkish-speaking patients and English-speaking patients, the interviews are carried out in Turkish or English. This unit, which serves refugee children and adolescents, has been organized as a whole day for admissions only 1 day a week, the other days of the week serve for the local patients. The refugee patients are referred to unit by non-governmental organizations. The local patients applied with the Central Physician Appointment System, which is a system affiliated to the Ministry of Health that enables appointments over the internet.

While the transportation of refugee patients to the hospital was provided by the vehicles of the non-governmental organizations, during the COVID-19 pandemic, the number of patients and families transported was reduced due to physical distance and isolation rules. There were no patients who did not attend their appointment due to COVID-19 infection. Within the period allowed by the Ministry of Health, information was obtained from psychologists and social workers who followed the patients in the non-governmental organizations and within a 3-month period March–May 2020 remote prescription was applied for patients who have already continued their visits regularly before the pandemic. However, due to lack of technical coverage, tele-medicine could not be performed within the unit. There are no patients coming from the refugee camp. The children have been residing in the province with their families, 2 children were under social services protection. The number of self-report scales with Arabic validity and reliability that can be used in the clinic was insufficient, and the number of patients who were able to fill both Arabic and Turkish scales was very low, so they were not included in the statistical analyses.

Refugee patients have evaluated by the same clinicians pre-pandemic and during the pandemic. This study was planned based on 1-year before and 1-year after the date of March 2020, when the first COVID-19 case was announced in Turkey. The 1-year number of outpatient unit admissions in two periods was reviewed with a retrospective observation in the hospital information system and the patient files. The total number of hospital admissions included both the first-time applicants and the control appointments, and the number of admissions between two periods was evaluated. The number of admissions, sociodemographic data, and diagnoses encoded according to ICD-11 were analyzed. Ethics Committee approval was obtained for this study (09.2021.584).

Before the pandemic (between March 2019 and February 2020), 2322 patients (local and refugee) applied to the same unit, and 236 (10.1%) of these patients were refugee children and adolescents. In the period of March 2020–February 2021, 1209 patients were evaluated in the same unit, and 10.4% (n = 126) of these patients were refugees. During the COVID-19 period, there was around 50% reduction in both local and refugee patient admissions.
Statistical analysis

Statistical analyses were performed with IBM SPSS (Statistics Package Program for Social Sciences) version 24.0 (IBM Corporation, Armonk, NY, USA). Continuous variables were evaluated with mean ± standard deviation. In the intergroup analysis of continuous variables, normality analyses were performed with the Kolmogorov–Smirnov Goodness of Fit Test. The t-test was used to investigate the difference between the two groups. Chi-square test was used for the difference of categorical variables between the two groups. Statistical significance level was accepted as $p<0.05$.

Results

Admissions on March–April–May 2020

During the home quarantine period (March–April–May 2020) applied after the first COVID-19 case was detected in Turkey (March 11, 2020), the number of refugee patient applications decreased to the lowest number ($n=13$). This was clearly a strict drop, since in the previous year, the number of admissions in this period was 52. All of these ($n=13$) admissions were follow-up appointments. In this specific period, the majority of the follow-ups were conducted by phone, and the medications of the patients were prescribed remotely. Considering the recommendations made by the Ministry of Health for non-urgent cases to postpone their appointments and reductions in numbers of total appointments in Central Physician Appointment System might have played a role. In addition, in the very early period of the COVID-19, many hospitals have been transformed rapidly into pandemic hospitals, and many clinicians began to serve in COVID-19 outpatient triage clinics and inpatient services, regardless of their area of specialty.

Admissions on June–July–August 2020

During the period of June–July–August 2020 at the end of the first home quarantine, there was again a significant decrease ($n=28$) in admissions compared to the previous year ($n=66$). One striking finding was that many of the refugee patients with ongoing treatment had drawbacks in accessing their medications, they either took medications irregularly or stopped without consulting to clinician, whereas patients with chronic medication usage reports were able to access their medications. In this period, most of the patients admitted to hospital for regular follow-up and prescription of their medication were the ones with attention deficit hyperactivity disorder (ADHD) diagnosis.

Admissions on September 2020 to February 2021

In the period of September to December 2020, number of psychiatric outpatient admissions were similar to previous year, which was followed by a sharp reduction in January and February 2021, due to increase in COVID-19 cases. The data of the admissions to the refugee unit every 3 months are shown in Figure 1.

Comparisons of the pandemic and pre-pandemic period

No significant difference was found in terms of mean age of the patients who applied to the outpatient clinic in both periods ($p=0.635$). While 19.66 ± 6.31 patients applied per month in the
pre-pandemic period, this number decreased to 10.50 ± 5.31 during the pandemic period, where the difference was statistically significant ($p = 0.01$). In the pre-pandemic period, significantly more female patients applied to the unit compared to the pandemic period ($p = 0.03$), and no significant difference was observed for male patients ($p = 0.06$), but the number of male patients was significantly higher than the number of female patients in both periods ($p = 0.01$).

Although number of admissions for autism spectrum disorders, speech impairment, and enuresis decreased during the pandemic period, the difference between the two periods was not statistically significant. On the other hand, admissions for destructive behavioral disorders such as ADHD, oppositional defiant disorder, and conduct disorder increased significantly during the pandemic period ($\chi^2 = 13.99, p = 0.001$). Rates of admissions for internalizing disorders such as depressive disorders and anxiety disorders decreased significantly during the pandemic period ($\chi^2 = 4.54, p = 0.03$). There was a significant decrease in the number of patients presenting with intellectual impairment and delayed cognitive development during the pandemic period ($\chi^2 = 10.72, p = 0.001$) (Table 1). The number of first admissions was similar in both periods, and it was noteworthy that the control appointments were low in both periods. There were 2 refugee patients who applied to the pediatric emergency clinic due to psychiatric complaints, and these patients were also consulted while being followed in the pediatric endocrine and orthopedic services, and were followed up after discharge.

**Discussion**

Refugee children and adolescents constitute one of the most psychologically vulnerable groups in the COVID-19 pandemic due to their living conditions, low economic status, experience of adverse childhood experience, and mental health problems (Brickhill-Atkinson & Hauck, 2021). Although...
many countries host refugees, healthcare services specific to this group could not be provided sufficiently (Blackmore et al., 2019; von Werthern et al., 2019). During the pandemic period, this group’s access to health services was adversely affected (Browne et al., 2021). According to the results of this study, which evaluated the admissions to the child mental health outpatient unit before and during the pandemic, the number of admissions of refugee patients decreased by half consistent with previous work (Delgado-Newlove et al., 2021). Girls applied less frequently, admissions for destructive behavioral disorders increased, while admissions due to internalizing disorders decreased.

In a study conducted in pre-pandemic period, refugees had negative perceptions about healthcare workers attitudes toward themselves (Rousseau et al., 2017). Therefore during the pandemic, they might have avoided admissions to healthcare units due to these attitudes. Similarly, digital information pollution about the pandemic might have affected the individuals in this closed group even more. The low number of admissions in the early stages of the pandemic suggested that the gathering of the whole family might have played a role by encouraging parent–child relationships and/or by decreasing symptom severity of the children. Due to the closure of schools, refugee children might have experienced peer bullying or academic anxiety to a much lesser degree and thus they might end up with a positive effect on their psychological well-being (Pottie et al., 2015). Also, during the early peak period of the pandemic, the families and the children might be in an effort to survive predominantly due to the health concerns. Another explanation might be that, since they live in a closed-cultured group, they may have received support from family members or neighbors during this period. The outnumber of male refugee children admissions can be explained by several factors. First, boys are viewed as culturally more salient, and boys’ behavioral problems might get more attention. Second, there might be a psychiatric stigmatization concern related to girls’ hospital admissions.

COVID-19 as a biomedical disease and societal event is viewed to influence family well-being and child mental health (Duan & Zhu, 2020). Considering that caregiver and child mental health are linked, also family stress increases susceptibility to relational conflict (Thompson & Rasmussen, 2020). The increase in the stress levels of refugee families with emotional, social, and economic difficulties over time might have led to the worsening of the mental symptoms in children. Since the parents of children with destructive symptoms have maladaptive coping skills, these children might

Table 1. Features of the refugee mental health unit admissions in pandemic and pre-pandemic.

|                          | Mar 2019–Feb 2020 | Mar 2020–Feb 2021 | p    |
|--------------------------|-------------------|-------------------|------|
| Age (mean ± SD)          | 9.91 ± 1.31       | 9.66 ± 1.23       | 0.63a|
| Total admission/per month (mean ± SD) | 19.66 ± 6.31   | 10.50 ± 5.31      | 0.01a|
| Female                   | 64                | 22                | 0.03b|
| Male                     | 172               | 104               | 0.06b|
| ADHD–ODD–CD (F90–F91)    | 73                | 61                | 0.001b|
| Depression-anxiety dis (F32–F40-41.) | 67           | 35                | 0.03b|
| Intellectual impairment (F70–73) | 52             | 13                | 0.001b|
| ASD (F84.0)              | 12                | 6                 | 0.78b|

aStudent-t test.
bChi-square test, SD: standard deviation, ADHD: Attention deficit hyperactivity disorder, ODD: Oppositional defiant disorder, CD: Conduct disorder, ASD: Autism spectrum disorder with ICD-11 codes (example: F90).
have referred for psychiatric help with a higher rate (Ersan et al., 2004). Nevertheless, individuals with internalizing problems or intellectual impairment might have not attracted as much attention as destructive behavioral disorders. In fact, it might be more desirable for children to be quiet and calm in a crowded home.

It is clear that the closure of schools during the pandemic period will have more adverse consequences on those children who already have difficulties in attending school. The school environment can increase the adaptation of refugee children to the society they live in, help them to develop a sense of belonging, and it can be protective in terms of mental illnesses and also be beneficial for acquisition of a foreign language. Consequently, staying away from school may result in lack of such supportive measures (Fazel et al., 2012).

**Conclusions and limitations**

In this particular study, we compared the hospital admissions of refugee children to a specialized mental health unit, within one-year period before and during the pandemic. Being the first study in the field, our data have significant outcomes by revealing the difficulties of refugee children. During the course of the pandemic, there was a significant decrease in the number of admissions of refugee children to mental health services. Nevertheless, there are some limitations of our study. The first one is our findings cannot be generalized since it included only the data from a single unit, and the second limitation can be stated as the absence of self-rated or parent-rated scales. We did not compare refugee patient data with local patients, since the way of admission of refugee and local patients to the mental health unit and the number of days for mental assessment were different, which can be considered as a limitation. In addition, considering that the mental health of children and adolescents will be affected by the mental well-being of the rest of their families, the fact that other family members were not evaluated in this study can be considered as a limitation. On the other hand, further research is needed to be planned in larger refugee groups residing either in the community or in camps. The absence of a similar study in the literature makes this present study unique, and we believe that the results of this study will contribute in the provision of preventive mental health policies to be developed during unfavorable conditions such as pandemics.

COVID-19 is a substantial global health problem that has a major impact on refugees who already constitute a high-risk group for all the aforementioned vulnerabilities. These groups may experience different levels of psychological crisis. When we consider the results of this study, in which demands to the unit are examined, as a preliminary evaluation, early action and measures need to be taken for refugee children. Such a wide time interval comparison will enable clinicians, nurses, health care workers, and policymakers to have more information about the effect of the pandemic on mental health service procurement and help to provide psychosocial support in the care programs with the collaboration of health care services, and specialized child psychiatry units to refugee children. The results of this study will also provide preliminary information to mental health professionals in this field. It is clear that the health policies developed in all countries should cover all refugees or local people, and necessary measures should be taken to prevent the long-term situations of refugee individuals from turning into tragedies. These policies should offer a holistic and culturally/linguistically sensitive view of health programs. In addition, multi-level, family-oriented and access-oriented, systemic and biopsychosocial step-by-step interventions should be planned, from access to basic food and hygiene products to economic supports, from school and online education infrastructure studies to the planning of education and training units. In addition, there will be a need for interventions to raise awareness in mental health from the screening of mental diseases. The integration of refugees with the society they live in and the improvement of their welfare will contribute to their psychological resilience in the event of a subsequent disaster.
Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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