**Cukurova Medical Journal**
ÇUKUROVA ÜNİVERSİTESİ TIP FAKÜLTESİ

Cukurova Med J 2023;48(2):616-628
DOI: 10.17826/cumj.1240228

**RESEARCH**

# Evaluation of sociodemographic and clinical characteristics of children applying for special needs report to a training and research hospital in Şanlıurfa

## Şanlıurfa'da bir eğitim ve araştırma hastanesine özel gereksinim raporu için başvuran çocukların sosyodemografik ve klinik özelliklerinin değerlendirilmesi

Gökçe Yağmur Efendi[1], Rahime Duygu Temeltürk[2], Işık Batuhan Çakmak[3]

[1]Şanlıurfa Mehmet Akif İnan Training and Research Hospital, Department of Child and Adolescent Psychiatry, Şanlıurfa, Turkey
[2]Ankara University, Department of Child and Adolescent Psychiatry, Ankara, Turkey
[3]Sungurlu State Hospital, Department of Psychiatry, Çorum, Turkey

**Abstract**

**Purpose:** This study aimed to evaluate the sociodemographic and clinical characteristics of cases who have applied to a research and training hospital for special needs reports for children.

**Materials and Methods:** Retrospective analysis was performed on the medical records of children and adolescents aged 0 to 18 who applied to the Medical Board of the Şanlurfa Mehmet Akif İnan Training and Research Hospital and underwent psychiatric evaluations between June 2022 and December 2022.

**Results:** The research covered 600 cases, of whom 39% (n=234) were female and 61% (n=366) were male, and the mean age at the time that patients applied to the child psychiatry outpatient clinic was 7.87±4.43. When the child psychiatry diagnoses in the special needs reports were examined, it was found that 78% of the cases (n=468) had at least one psychiatric diagnosis, and 86.3% (n=518) of all patients had no previous psychiatric drug use. The most common psychiatric disorder was Borderline Intellectual Functioning (n=110), followed by Specific Learning Disorder (n=64). Autism Spectrum Disorder was more common in boys whereas Severe Intellectual Disability was significantly more common in girls. There was no significant difference between the 3 different age groups in terms of the frequency of Mild Intellectual Disability, Severe Intellectual Disability, and Autism Spectrum Disorder diagnoses.

**Conclusion:** Psychiatrists and other medical professionals can greatly benefit from knowing the characteristics of children and adolescents who apply to the medical boards for special needs reports in various parts of Turkey. To

**Öz**

**Amaç:** Çalışmamızda bir eğitim ve araştırma hastanesine çocuklar için özel gereksinim raporu almak üzere başvuran olguların sosyodemografik ve klinik özelliklerinin incelenmesi amaçlanmıştır.

**Gereç ve Yöntem:** Haziran 2022-Aralık 2022 tarihleri arasında Şanlıurfa Mehmet Akif İnan Eğitim ve Araştırma Hastanesi Sağlık Kurulu'na başvuran ve psikiyatrik muayenesi gerçekleşen 0-18 yaş arası çocuk ve ergenlerin tıbbi kayıtları retrospektif olarak incelenmiştir.

**Bulgular:** Çalışmaya %39'u (n=234) kız, %61'i (n=366) erkek olmak üzere toplam 600 olgu dahil edilmiştir ve hastaların çocuk psikiyatrisi polikliniğine başvurdukları andaki yaş ortalamaları 7,87±4,43 olarak saptanmıştır. Özel gereksinim raporlarında yer alan çocuk psikiyatrisi tanıları incelendiğinde olguların %78'inde (n=468) en az bir psikiyatrik tanı olduğu ve tüm hastaların %86,3' ünün (n=518) daha önce psikiyatrik ilaç kullanmadığı saptanmıştır. Özel gereksinim raporlarında en sık yer alan psikiyatrik bozukluk, Sınırda Entelektüel İşlevsellik (n=110) olup, bunu Özgül Öğrenme Bozukluğu (n=64) takip etmektedir. Otizm Spektrum Bozukluğu erkeklerde daha yaygınken, Ağır Zihinsel Yetersizlik kızlarda anlamlı olarak daha yaygın bulunmuştur. Hafif Düzeyde Zihinsel Yetersizlik, Ağır Düzeyde Zihinsel Yetersizlik ve Otizm Spektrum Bozukluğu tanılarının görülme sıklığı bakımından 3 farklı yaş grubu arasında anlamlı fark saptanmamıştır.

**Sonuç:** Türkiye'nin farklı bölgelerinde sağlık kurullarına özel gereksinim raporu için başvuran çocuk ve ergenlerin özelliklerinin belirlenmesi, psikiyatristler ve diğer uzmanlık dallarında çalışan hekimler için klinik uygulamada önemli

Address for Correspondence: Gökçe Yağmur Efendi, Şanlıurfa Mehmet Akif İnan Training and Research Hospital, Department of Child and Adolescent Psychiatry, Şanlıurfa,Turkey E-mail: gokceefendi@gmail.com
Received: 23.01.2023 Accepted: 13.06.2023

fully address this matter, further research with larger numbers of samples from various centers are required.

**Keywords:**. Child psychiatry, children with disabilities, assessment of health care needs

yararlar sağlayacaktır. Bu konuyu tam olarak ele almak için farklı merkezlerden daha büyük örneklemlerle daha fazla çalışmaya ihtiyaç duyulmaktadır.

**Anahtar kelimeler**: Çocuk psikiyatrisi, engelli çocuklar, sağlık ihtiyaçlarının değerlendirilmesi

## INTRODUCTION

The UN Convention on the Rights of Persons with Disabilities (UNCRPD) states that people with disabilities include those who have long-term physical, mental, intellectual, or sensory impairments that, in combination with various barriers, may prevent their full and effective participation in society on an equal basis with others. Nevertheless, defining disability is difficult because it is a "complex, dynamic, multidimensional, and contested" phenomenon[1,2]. An extensive set of measures exist for defining and quantifying the percentage of people with a disability in the population, and different studies report varied disability rates due to diverse methods and definitions of disability[3]. The global prevalence of disability among adults is estimated to be around 14%, and The World Health Organization estimates that 15-20% of children worldwide have disabilities, 85% of which live in developing countries[1,4]. In the Disability Survey of Turkey, it is stated that 12.29% of the entire population and 8.78% of the child and young age group are in the "disabled" category[5].

It is widely accepted that people with special needs may require services for safety, care, rehabilitation, counseling, and education. Children with special needs in Turkey are given a special needs report so they can benefit from social, educational, and economic rights. To use their aforementioned rights, children with disabilities and their caregivers must first apply to hospital medical boards. A medical report regulation, which focuses on determining the special needs status of the children, not the disability rate, came into force on 20.02.2019, and with the new regulation called 'Regulation on Assessment of Special Needs for Children' (RASNC), some changes have been made in the reporting system. The disability rates, which were stated as percentages for each system in the previous medical report regulation, are specified according to the 'levels of special needs' for different areas in RASNC. The special needs levels in RASNC consist of seven degrees, from 'having special needs to 'having special condition needs.' Three special needs areas are defined in the child and adolescent psychiatry domain: cognitive development, child and adolescent psychiatry, and language-speech-communication development. Cognitive developmental delays and intellectual disabilities are included in the 'Cognitive Development' domain, and it is emphasized that the term "delayed milestone" should be used instead of the terms "mental retardation" and "mental motor retardation" in this domain. The 'Child and Adolescent Psychiatry' domain includes schizophrenia and other psychotic disorders, autism spectrum disorder (ASD), cognitive and mental disorders due to organic brain damage, mood disorders, anxiety disorders, and Specific Learning Disorder (SLD). The 'Language-Speech-Communication Development' domain includes receptive and/or expressive language developmental delays, speech sound disorders, fluency disorders, social communication disorders, voice disorders, and communicating with sign language. The striking point here is that the language and speech disorders reported in the Ear, Nose, and Throat area in the previous reporting system are included in the areas related to child and adolescent psychiatry in RASNC[6].

According to many research, children with impairments are less likely to enroll in school, attend school less frequently, and move on to higher education[7]. Additionally, several studies show that children with various chronic diseases are at increased risk for psychiatric disorders such as depression and anxiety[8]. Having a child diagnosed with a chronic disease or disability may also negatively affect the caregivers' physical, psychological, and social health[9]. Studies also observed that parents of disabled children might be severely burdened regarding financial liability[10]. Although it is clear that children with special needs and their families need additional support in multiple areas, there are limited studies in the literature addressing these issues. In a study conducted by Yıldız and Tarakçıoğlu, children who have applied for a special needs report at a research and training hospital in İstanbul were evaluated, and the most common psychiatric diagnosis was detected to be learning disorder[11]. Another study conducted in

Bursa determined that the most common diagnosis of the cases who applied to the hospital for a special needs report was intellectual disability[12]. Kayhan and Öztürk investigated the children who had applied to a university hospital for special needs reports, and it was found that the most common diagnosis was intellectual disability, and neurological diseases were the most common comorbidities[13]. Another recent study conducted in Ankara revealed that 'intellectual disability' was the most common psychiatric diagnosis in children who applied for a special needs report[14]. While there are studies describing the sociodemographic and clinical characteristics of the children who were evaluated regarding their application for a medical report conducted at hospitals in the western parts of Turkey, no studies were found conducted in the Southeast part of Turkey investigating the characteristics of this specific patient population.

Further studies examining the sociodemographic and clinical characteristics of the children who have applied to hospitals in various regions of Turkey to obtain special needs reports are required in order to accurately determine the needs and characteristics of children with disabilities in order to create necessary intervention plans and appropriate health policies. This research aims to evaluate the sociodemographic characteristics, reasons for application, and diagnoses of the cases referred to our child and adolescent psychiatry outpatient clinic to obtain a special needs report. As our research was conducted in a hospital that serves the pediatric population from various regions of Şanlıurfa and surrounding provinces and is authorized to provide RASNC reports, we anticipate that the findings of our study will make a noteworthy contribution to the existing literature.

## MATERIALS AND METHODS

Our study was approved by the Harran University Ethics Committee (Protocol No: HRU/23/01/17), and the work in the submitted manuscript has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki).

### Participants

The study sample consists of patients who applied to Şanlıurfa Mehmet Akif Inan Hospital for a special needs report between June 2022 and December 2022 and were evaluated in the child and adolescent psychiatry clinic according to the RASNC Guidelines. Patients who applied to the medical board for a special needs report and were evaluated in the child psychiatry clinic within the specified date range were included in the study, and there were no exclusion criteria except for the lack of adequate information in the patient files. The files of all patients who met the specified criteria were examined retrospectively, and a total of 650 patient files were evaluated. Fifty patient files were excluded from the study because there was insufficient information in their medical files. In our hospital, physicians perform health committee rotations every six months. We ensured that patient evaluations were conducted by the same physician by limiting our analysis to patients who had applied to the hospital within a six-month time frame, coinciding with physician health committee rotations.

### Procedure

Sociodemographic (age, gender, educational status) and clinical (psychiatric disorders, comorbid medical diseases) characteristics of the cases were examined from the patients' medical files retrospectively. Physicians carefully document patients' medical information in an electronic system during examinations at our hospital, and this detailed information is then easily accessed for follow-up appointments. Additional data on the difference between the previous and present disability rates of patients who had objected to their previous special needs reports were also included. Psychiatric diagnoses were made by child and adolescent psychiatry specialists using clinical interviews based on the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5)[15]. Additional instruments were also administered by clinical psychologists to support the diagnoses. Developmental levels of children under the age of six were measured by the Ankara Developmental Screening Inventory (ADSI) and intelligence levels of children older than six were determined by the Kent EGY and Porteus Maze tests. The Specific Learning Disorder (SLD) battery was also applied in cases suspected of SLD[16].

The RASNC guidelines incorporate a comprehensive assessment approach for determining the severity of intellectual disability in patients, which takes into account not only the results of psychometric tests but also patients' support requirements and functional abilities[6]. Upon the completion of clinical interviews and psychometric evaluations patients were

diagnosed as having a mild, moderate, and severe intellectual disability according to the guidelines.

## Measures

### Ankara Developmental Screening Inventory (ADSI)

ADSI is a developmental screening test for children under 6 years of age and was developed by Savasir and her colleagues in 1992[17]. The inventory comprises 154 inquiries directed towards both the mother and the child, encompassing diverse and interconnected domains of development. ADSI yields four scores: Cognitive language score, Fine motor score, Gross motor score, and Social and self-help score[17,18]. The total general developmental raw scores are converted to T scores with a mean of 50 and a standard deviation of 10, and this scoring enables the evaluation of children from different age groups with a common score[19]. ADSI is a prevalent assessment tool utilized in Turkey to evaluate the developmental progress of children aged 2 to 66 months[20].

### The Kent EGY and Porteus Maze Tests

Kent EGY test was developed by Grace Kent in 1941 as a brief test of verbal ability for children between 6 and 14 years and adults with suspected intellectual disabilities[21]. Each correct answer gets a "1" point, and as a result, the person's mental age is determined[22]. In the validity and reliability study of the Turkish version, it was suggested to use a composite score formed by average performance in the Porteus Maze test (PMT) and EGY tests[23]. PMT is a nonverbal test of performance intelligence designed to assess intelligence capacity and measure planning and behavioral disinhibition[24]. The test was developed by Porteus and its adaptation was conducted by Togrol for Turkish children[25,26]. The scores are given according to performance in the labyrinth test, and the intelligence level is determined by using the evaluation chart of the test.

### Specific Learning Disorder (SLD) Battery

It is a clinical battery used by Korkmazlar in 1993 to support the diagnosis of SLD, and later expanded by Erden and Kurdoğlu in 2003 by additional tests[27,28]. It consists of 9 subtests: reading test, writing test, writing the alphabet in order and in lowercase letters, addition, and multiplication questions according to school grade level, questioning the precedence-after relationships with months and days, Gesell development figures, clock drawing test, and Harris lateralization test[16].

## Statistical analysis

Statistical Package for the Social Sciences (SPSS) version 23.0 package program was used for the statistical analysis of the data. Descriptive data were presented as numbers and percentages for categorical variables and as the mean and standard deviation for numerical data. The Pearson chi-square test was used for the comparison of psychiatric disorders frequencies between two genders and three different age groups. Whether the numerical data showed normal distribution or not was examined with the Kolmogorow-Smirnov test. All comparisons were made in two directions and the p-value was taken as 0.05 for significance.

# RESULTS

Six hundred cases were included in the study, of whom 39% (n=234) were female and 61% (n=366) were male. The mean age at the time patients applied to the child psychiatry outpatient clinic was 7.87 ± 4.43. 94.3% of the patients (n=566) were Turkish citizens and 5.7% (n=34) were Syrian refugees. It was determined that 35.7% (n=214) of the patients were of preschool age, and 64.3% (n=386) were of school age. The sociodemographic features of the cases are shown in Table 1.

**Table 1. Sociodemographic characteristics of cases**

| Sociodemographic Variables | Result |
|---|---|
| Age (years), mean±SD | 7,87±4,43 |
| Gender, n (%) | |
| Female | 234 (39%) |
| Male | 366 (61%) |
| Nationality, n (%) | |
| Turkish | 566 (94,3%) |
| Other | 34 (5,7%) |
| School Attandance, n (%) | |
| Preschool age | 214 (35,7%) |
| School age | 386 (64,3%) |
| No School Attendance | 106 (17,7%) |
| Not Attending to School Regularly | 27 (4,5%) |
| Attending to School Regularly | 253 (42,2%) |
| Kinship Between Parents, n (%) | |
| Present | 273 (45,5%) |
| Not present | 323 (53,8%) |
| Unknown | 4 (0,7%) |

SD: Standard Deviation, n: number

When the reasons for applying to the medical board were examined, it was found that 27.2% of the patients (n=163) applied for their physical illnesses, 44.3% of the patients (n= 266) applied for their psychiatric disorders, and 24.5% of the patients (n=147) applied due to having both physical and psychiatric illnesses, 0.8% of the patients (n=5) applied for the cancellation of a pre-existing special needs report, 0.8% (n=9) applied for unknown reasons, and 2.3 % (n=14) applied due to other reasons such as school-related regulations or other legal reasons.

Upon reviewing the patients' applications submitted to the health board, it was observed that a significant proportion of individuals sought to obtain a reiteration of their medical report. The data on patients' number of applications to the health board are presented in Table 2.

**Table 2. Number of applications to the health board**

| SNRC Applications | n (%) |
|---|---|
| First Application | 241 (40.2) |
| Repeated Applications | 258 (43) |
| Change in Report Content | 146 (24.3) |
| No Change in Report Content | 102 (18.7) |
| Objection to the Report/ Redirected Due to Change in Report Content | 101 (16.8) |
| No Change in Report Content | 53 (8.8) |
| Disability Rate Increased (child psychiatry domain) | 43 (7.1) |
| Disability Rate Increased /Decreased (other domains) | 5 (0.9) |

SNRC: Special need reports for children; n: number

Among all referrals, 82% (n=492) of the cases had not applied to child and adolescent psychiatry before, whereas 18% (n=108) had previous applications. The study revealed that 9.2% (n=55) of the total patient population had regular follow-ups in child psychiatry, while 8.8% (n=53) did not attend such follow-ups regularly. Upon examination of cases that had not previously sought treatment in child psychiatry, 23.37% (n=115) were identified as requiring further evaluation and ongoing monitoring for potential psychiatric disorders. The reasons for referral to further psychiatric examination were school refusal (n=6), irritability (n=15), anxiety (n=14), depressive complaints (n=3), short attention span (n=44), shyness (n=9), behavioral problems (n=12), hyperactivity/impulsivity (n=6), non-adherence to other medical illness treatment (n=6), other reasons (poor relationship/communication quality) (n=3).

The presence of comorbid psychiatric diseases, which were not included in the special needs reports of the cases, was examined, and it was found that 85.7% of the cases (n=514) did not have any comorbid psychiatric disorders, whereas 86 of the cases were found to have comorbid psychiatric disorders. Of the cases with additional psychiatric disorders, 39.5% (n=34) had attention deficit and hyperactivity disorder (ADHD), 32.5% (n=28) had conduct disorder, 16.2% (n=14) had ADHD and conduct disorder, 11.6% (n=10) had other psychiatric disorders such as mutism.

Regarding the utilization of psychotropic drugs, the majority of patients, constituting 86.3% (n=518) of the sample, had not previously employed any psychiatric medication. A minority of patients, comprising 6.2% (n=37), had previously utilized a psychiatric drug for a certain duration but had ceased usage prior to the current evaluation. Additionally, 7.5% (n=45) of the patients were currently taking psychotropic medication at the time of assessment. Among 45 cases with psychotropic drug use at the time of evaluation, 46.6% of the patients (n=21) were using antipsychotics, 22.2% of the patients (n=10) were using psychostimulants, 2.2% of the patients (n=1) were on antidepressants, 6.6% of the cases (n=3) were using antipsychotics and antidepressants, 7.7% of the patients (n=8) were using antipsychotics and psychostimulants, and 4.4% of the cases (n=2) did not know what type of drug they were using. It was detected that 87.5% of the patients (n=525) did not use any medical drugs, and out of the 75 patients who were on non-psychotropic drugs, 74.6% (n=56) of them were using antiepileptic drugs, 13.3% of them (n=10) were using insulin, and 12.1% of the cases (n=9) were using other medical drugs.

When the person/organization who referred the cases to the health board was examined, it was observed that 86.2% of the cases (n=517) applied by their demand, 9.2% of the cases (n=55) upon a referral by teachers, and 4.7% of the cases (n=28) applied upon a referral by doctors from other branches/other health care providers.

The most common diagnosis was cerebral palsy (n=63) in the movement development-musculoskeletal system domain, epilepsy (n=22) in

the nervous system domain, loss of hearing (n=34) in the hearing-ear-nose-throat system domain, Down Syndrome (n=29) in the hereditary-congenital disease domain and vision loss (n=19) in the vision function domain.

The comorbid medical diagnoses of patients are shown in Table 3.

When the child and adolescent psychiatry diagnoses in the special needs reports were examined, it was found that 22% of the cases (n=132) did not have any diagnosis related to the child psychiatry field, and 78% of the cases (n=468) had at least one diagnosis from the child and adolescent psychiatry field. The distribution of the cases in the child psychiatry domain is shown in Figure 1.

**Table 3. The presence of special needs in medical fields other than psychiatry**

| Medical Fields | n=292 (%) |
|---|---|
| Musculoskeletal System | 110 (37.6) |
| Nervous System | 53 (18.1) |
| Hearing-Ear-Nose Throat | 37 (12.6) |
| Hereditary-Congenital Disease | 29 (9.9) |
| Vision Function | 24 (8.2) |
| Heart, Circulatory System | 9 (3) |
| Metabolism | 8 (2.7) |
| Hematology-Oncology | 5 (1.7) |
| Genitourinary | 2 (0.6) |
| Digestion | 2 (0.6) |
| Nephrology | 1 (0.3) |
| Dermatology-Venereal | 1 (0.3) |

n: number

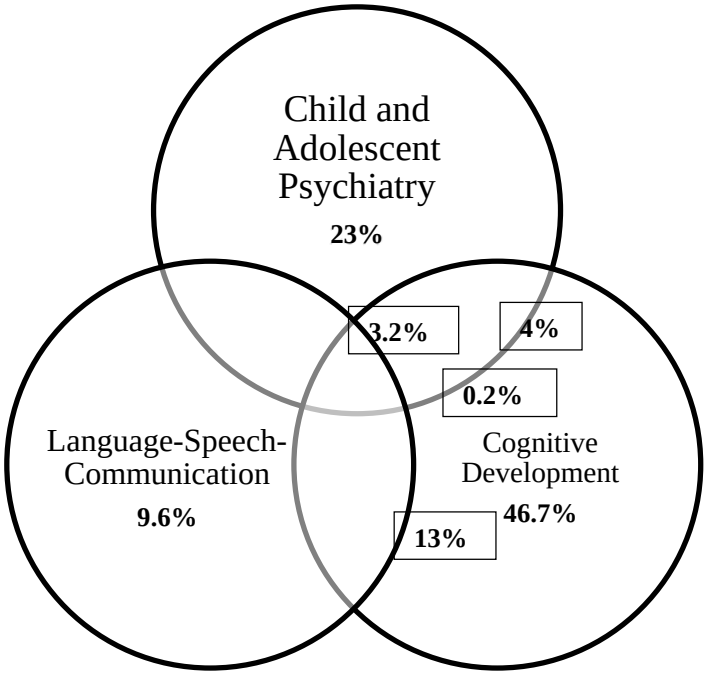


**Figure 1. The Distribution of the Cases in the Child Psychiatry Domain**

Table 4 lists the mental illnesses included in the subjects' most recent special needs reports as well as those mentioned in their prior health reports. Out of all cases, 26% (n=156) had no psychiatric concerns reported by their caregivers when they requested special needs reports from the medical board. During the examination, 204 patients' parents reported that their children were experiencing learning or academic difficulties, accounting for 34% of the total patients. Caregivers reported a lack of speech or speech delay as the second most common psychiatric complaint, accounting for 17% of the cases (n=102). This

complaint was followed by forgetfulness and social communication difficulties, which were reported at 5% for each complaint (n=30).

In order to examine whether the distribution rates of diseases differ according to gender, Pearson Chi-Square Test was performed and it was seen that ASD diagnosis was significantly more common in boys than girls (p <0.001). In contrast, Severe Intellectual Disability diagnosis was significantly more common in girls (p=0.04). There was no significant difference between the two genders in terms of frequency of Borderline Intellectual Functioning (p=0.12), Specific Learning Disorder (p=0.29), Communication Disorder (p=0.18), and Mild (p=0.14) and Moderate (p=0.56) Intellectual Disabilities.

**Table 4. Psychiatric diagnoses in the previous reports and in the current reports**

| Psychiatric Diagnoses | Previous Report (n=359) n (%) | Current Report (n=600) n (%) |
|---|---|---|
| No Psychiatric Diagnosis | 91 (25.34) | 132 (22.00) |
| Unknown | 14 (3.89) | 0 (0) |
| Borderline Intellectual Functioning | 86 (23.95) | 110 (18.33) |
| Specific Learning Disorder | 24 (6.68) | 64 (10.66) |
| Borderline Intellectual Functioning & Specific Learning Disorder | 1 (0.27) | 20 (3.33) |
| Autism Spectrum Disorder | 34 (9.47) | 44 (7.33) |
| Communication Disorder (only) | 13 (3.62) | 45 (7.50) |
| Language Disorder | 8 (2.22) | 19 (3.16) |
| Speech Sound Disorder | 3 (0.83) | 10 (1.66) |
| Fluency Disorder | 1 (0.27) | 10 (1.66) |
| Social Communication Disorder | 1 (0.27) | 6 (1.00) |
| Communication Disorder (comorbidity) | 12 (3.34) | 76 (12.66) |
| Communication Disorder & Borderline Intellectual Functioning | 8 (2.23) | 46 (7.66) |
| Communication Disorder & Mild Intellectual Disability | 2(0.55) | 15 (2.50) |
| Communication Disorder & Specific Learning Disorder | 2 (0.55) | 15 (2.50) |
| Mild Intellectual Disability | 45 (12.53) | 55 (9.16) |
| Moderate Intellectual Disability | 32 (8.91) | 42 (7.00) |
| Severe Intellectual Disability | 7 (1.94) | 12 (2.00) |

n: number

The distribution of the diseases in 3 different age groups (0-6, 7-12, and 13-18 years) classified according to the developmental characteristics of the children was also examined by conducting Pearson Chi-Square Test. It was found that the proportion of patients with Borderline Intellectual Functioning was significantly higher in the '0-6' age group than in other age groups (p <0.001). There was no significant difference between age groups regarding Autism Spectrum Disorder, Mild and Severe Intellectual Disabilities (p>0.5). There was a significant difference between the three age groups for Moderate Intellectual Disability, and the disorder was seen at similar rates in the '7-12' and '13-18' age groups, while it was significantly less common in the '0-6' age group (p <0.001).

## DISCUSSION

In this study, we evaluated the sociodemographic and clinical characteristics of the cases who applied to the medical board for a special needs report and had a child and adolescent psychiatry examination according to the RASNC Guidelines. A notable contrast between our research and prior studies utilizing RASNC guidelines for patient assessments is that our study was conducted on a sample from a hospital located in Şanlıurfa, where health board professionals routinely perform numerous medical

evaluations and examinations. This research also evaluated whether there were any changes in the reports of the cases who had objected to their current medical reports.

We found that 61% of the cases who applied for a special needs report were male, which is similar to the data of previous studies (61,6- 62.4%)[13,29,30]. The potential rationale for this phenomenon could be attributed to the fact that neurodevelopmental conditions, such as autism and intellectual disability, exhibit a higher prevalence rate among males[31]. On the other hand, these results may also suggest that girls are being neglected in accessing health services or that symptoms of neurodevelopmental problems are being left under-identified in girls[29,32].

According to the Turkish Statistical Institute, the province with the highest child population rate was found to be Şanlıurfa, with a rate of 45.2%, and there were 293.718 children under the age of four in Şanlıurfa in 2021[33]. In our study, the mean age of the cases was calculated as 7.87, which is similar to the mean age determined in other studies[34,35]. In other words, we found no difference between the studies conducted in other provinces and our study regarding the mean age of children who applied to the health board for a special needs report. Since Şanlıurfa seems to have a younger population than other provinces in Turkey, we expected that the mean age at the time of psychiatric evaluation in our study would be lower than reported in other studies. Although the number of young population living in Şanlıurfa is high, our results may indicate that the special needs of these children are not recognized at an early stage.

In our country, numerous Syrian citizens have been granted temporary protection status and/or other statuses due to the humanitarian crisis in Syria. Despite the fact that there are approximately 3.5 million Syrian citizens residing in Turkey, there is a shortage of literature on the nationalities of patients who have requested a special needs report. A study conducted in Isparta reported that 2.2% of the patients who applied for a special needs report and were examined by an otorhinolaryngologist were of Syrian nationality[36]. In our study, 5,7% of the patients who applied to get a special needs report were Syrians and this percentage seems to be higher than the percentages reported in similar studies conducted in different parts of Turkey. This finding also aligns with the fact that Şanlıurfa is one of the cities housing the highest number of Syrian refugees, with 369,736 people, according to the General Directorate of Migration Management[37]. As reported by several studies, the effectiveness of healthcare services for refugees may be limited by language barriers, mobility of the refugees, and some legal restrictions[38]. Considering the relatively high percentage of patients of Syrian nationality in our study, it can be interpreted that translation services provided in hospitals and information services for foreign patients are even more critical for Şanlıurfa province. Consanguineous marriages are assumed to be practiced in almost half of the world's societies, most commonly in the Middle East and Asia, and it is estimated that 11% of the global population is married to a kinsperson[39]. Cultural factors can highly influence marriage patterns and tend to vary in different regions of Turkey. The kinship between parents was detected as 45.5% in our study, which is markedly higher than those reported in studies conducted in different regions of Turkey[40,41]. Therefore, in regions such as Şanlıurfa, where consanguineous marriages are common, it may be beneficial to develop public health programs to inform society about the possible health consequences of consanguineous marriages.

When the reasons for applying to the medical board for special needs reports were examined, we found that 44.3% of the patients applied solely for their psychiatric disorders. Our result supports the findings from previous research showing that the most common reason for applying to the medical board is psychiatric disorders[42]. In our study, we detected that the highest percentage of the patients applied for the repetition of their report, consistent with other studies showing that the most frequent application to the health board is for report repetition[12]. Upon evaluating the patients who had objected to their previous special needs reports regulated according to RASNC, we observed that there was no change in the reports for the majority of the cases. It could be argued that preventing patients from objecting to their special needs reports arbitrarily may be beneficial as most objections do not result in any changes to the reports, and they add extra burden to the health system.

While most applications to the health board are related to psychiatric concerns, our study found that 82% of cases had not previously sought assistance from child psychiatry services. Notably, although most patients have psychiatric complaints, they directly apply for a report before seeking psychiatric

help. There could be several different possible explanations for this situation, such as patients' general knowledge level about a psychiatric examination being insufficient, patients acting with the motivation of getting financial support from the government, and patients being misdirected by other institutions. The fact that most patients apply for a health board examination with psychiatric complaints without a prior detailed psychiatric examination may cause problems in the functioning of the health system, and additional studies are needed to understand this phenomenon fully.

In 23.37% of the cases (n=115) who had not applied to child psychiatry before their medical board application for a special needs report, psychopathology was considered after the medical examination, and a referral was made for a detailed psychiatric examination. The most common reason for referral to further psychiatric examination was a short attention span, and it is seen that ADHD was also the most common diagnosis in cases that have previously applied to child psychiatry clinics. These results are consistent with previous studies showing that one of the most common psychiatric disorders in children is ADHD, and ADHD is a common comorbidity of intellectual disabilities and autism[43-45]. Although most of the cases with comorbid psychiatric disorders had ADHD, when we looked into patients who had psychiatric drug use at the time of evaluation, the majority of the cases (n=21) were using antipsychotics. This finding may support previous studies demonstrating high off-label use of antipsychotics in children and adolescents[46]. Studies suggest that despite the lack of empirical support and FDA approval, antipsychotic use in youth with ADHD appears to be the fastest-growing indication for antipsychotics[47].

In our study, a substantial number of children's (n=55) complaints were noticed by their teachers, which may support previous studies that emphasize teachers' vital position in detecting children's psychological distress. It may be beneficial to sensitize the teachers about childhood psychiatric disorders further and make them understand and utilize their crucial role in the early identification of problems and early referral[48]. Many children cannot benefit from existing school mental health services in Turkey[49]. By introducing mental health screening programs in schools and raising awareness among teachers, more children with mental health issues can be identified and referred to psychiatrists for appropriate care. The frequency of having a diagnosis from medical fields other than child and adolescent psychiatry for the cases who applied to the health board is stated to be between 27-57%, and it is emphasized that the patients are mostly diagnosed with a disease of the nervous and musculoskeletal system[13,34,35]. Looking into the presence of special needs in medical domains other than psychiatry in our population, the most common 'special needs' domain was movement development-musculoskeletal system and this finding is consistent with the previous studies in the field[12,35]. Consistent with the literature, it was found that epilepsy and cerebral palsy diagnoses were the most common diagnoses in our patient population[30,35].

When the child and adolescent psychiatry diagnoses in the special needs reports were examined, it was found that 22% of the cases (n=132) did not have any diagnosis related to the child psychiatry field, and 78% of the cases (n=468) had at least one psychiatric diagnosis. Our study found that the cases most frequently had a diagnosis in the cognitive development domain, followed by a diagnosis in the child and adolescent psychiatry domain. The most common primary psychiatric complaint of the cases as expressed by caregivers, was learning/academic difficulties. The distribution of special needs domains in our study is similar to previous studies [12]. When psychiatric diagnoses were evaluated, the most common diagnosis was 'Borderline Intellectual Functioning', and for the 359 patients with previous health reports, the most common psychiatric diagnosis in the previous reports was the same. These findings do not support other studies showing that 'Mild Intellectual Disability' is the most common diagnosis in special needs reports[13,35,50]. A possible explanation for this may be that the intelligence test used in our study was different from the ones preferred in other studies. Some studies stated that intelligence tests such as the Porteus and Kent EGY used in our study give higher scores than comprehensive intelligence tests such as Wechsler Intelligence Scale for Children Revised Form (WISCR)[51]. Some researchers even argue that short intelligence tests are insufficient to determine the IQ score accurately, and it may be problematic to expect these scales to help make an accurate assessment[52]. It is possible to argue that the intelligence tests utilized in our hospital may not be comprehensive enough in certain areas and that such test outcomes could impact physicians' decisions. Nonetheless, when evaluating the degree of intellectual disabilities in the

RASNC, the focus is placed on functionality instead of intelligence test outcomes. Here, another explanation that may shed light on our result is that the levels of functionality of the children with intellectual disabilities in our study were perceived and reported better than the actual level by themselves and their families. Şanlıurfa is a province where the traditional social structure is still active, having many children is common, and the household size is large[53]. It is well known that cultural diversity has significant impacts on the many aspects of mental health, and some researchers suggest that, in collectivist cultures, healing is a product of interdependence[54,55]. Further studies investigating the relationship between cultural factors and mental health should be conducted to understand further this finding that differs from what other studies report.

Our study found that ASD is more prevalent in boys than girls, which aligns with previous research indicating that neurodevelopmental disorders are more frequent among males. The causes of the higher occurrence of neurodevelopmental disorders in males are usually intricate, involving a combination of genetic, hormonal, and environmental factors[56]. In our study, the rate of girls with severe intellectual disabilities was found to be significantly higher than boys. Although the previous body of literature revealed that intellectual disability is more common in boys, some researchers claim that as the severity of intellectual disability increases, the disparity between the proportions of boys and girls with intellectual disability decreases[57]. Treating children with intellectual disabilities includes special education, which is a crucial step. Our findings may suggest that severe intellectual disability is more prevalent in girls, possibly due to the delayed recognition of symptoms and limited access to early intervention programs for girls.

In our study, Borderline Intellectual Functioning was significantly more common in the '0-6' age group, whereas Moderate Intellectual Disability was significantly less common in the same age population. It is known that Moderate Intellectual Disability can be seen at the same rate in every socioeconomic segment of society, but Borderline Intellectual Functioning is more common in groups with low socioeconomic status due to a lack of appropriate stimuli, inadequate protein nutrition, and various unfavorable living conditions[58]. In light of this information, it can be suggested that the young children in our study experience developmental delay due to various adverse conditions rather than biological factors. There is not much research in the literature on the course of borderline intellectual functioning and researchers claim that this group of patients is often lost in the health system and may not receive appropriate care given their unique clinical profile[59]. More research should be conducted to increase clinicians' awareness of the health needs of patients with borderline intellectual functioning.

Our study's primary limitation is that we only did a retrospective analysis of the data. Our results might not be as reliable as those from long-term research as a result. It should be mentioned that while our study was conducted at a single facility, our conclusions might not apply to the full clinical or general population. The sample size could not be determined since the study is descriptive and includes all patients who requested a special needs report at the child psychiatry outpatient clinic within the indicated periods. Another drawback of the study is that standardized diagnostic interviews were not employed; rather, mental diagnoses were determined clinically by doctors working in the field.

The characteristics of patients who have submitted applications to the medical health boards are investigated in this study. Our study's methodology is similar to other studies that looked at the clinical and sociodemographic characteristics of applicants to medical boards. However, it also varies in that it examines whether the report rates for patients who have objected to their reports have changed and includes a sample from Şanlurfa. We anticipate that both child and adolescent psychiatrists and medical professionals from other specialties will gain from our findings. Additional research using more extensive samples, including centers from around our nation, will considerably advance the body of literature.

**Author Contributions:** Concept/Design : GYE; Data acquisition: RDT, IBÇ; Data analysis and interpretation: GYE, RDT, IBÇ; Drafting manuscript: GYE, RDT, IBÇ; Critical revision of manuscript: GYE, RDT, IBÇ; Final approval and accountability: GYE, RDT, IBÇ; Technical or material support: GYE; Supervision: GYE, RDT, IBÇ; Securing funding (if available): n/a.
**Ethical Approval:** Ethical approval was obtained from the Harran University Clinical Research Ethics Committee with the decision dated 09.01.2023 and numbered HRU/23.01.17.
**Peer-review:** Externally peer-reviewed.
**Conflict of Interest:** Authors declared no conflict of interest.
**Financial Disclosure:** Authors declared no financial support

## REFERENCES


1. WHO. World Report On Disability. Geneva, World Health Organization. 2011.
2. UN. Convention On The Rights Of Persons With Disabilities And Optional Protocol. New York, UN. 2006.
3. Burkhauser RV, Houtenville AJ, Tennant JR. Capturing the elusive working-age population with disabilities: reconciling conflicting social success estimates from the current population survey and American community survey. J Disabil Policy Stud. 2014;24:195-205.
4. Mitra S, Sambamoorthi U. Disability prevalence among adults: estimates for 54 countries and progress toward a global estimate. Disabil Rehabil. 2014;36:940-47.
5. Türkiye Özürlüler Araştırması. Ankara, Devlet İstatistik Enstitüsü Matbaası. 2004.
6. TC Başbakanlık. Çocuklar İçin Özel Eğitim Değerlendirmesi Hakkında Yönetmelik. Resmi Gazete. Sayı: 3069:1-412.
7. Filmer D. Disability, poverty, and schooling in developing countries: results from 14 household surveys. The World Bank Economic Review. 2008;22:141-63.
8. Breslau N. Psychiatric disorder in children with physical disabilities. J Am Acad Child Psychiatry. 1985;24:87-94.
9. Elmore, D. The Impact of Caregiving on Physical and Mental Health: Implications for Research, Practice, Education, and Policy. In The Challenges of Mental Health Caregiving (Eds R Talley, G Fricchione, B Druss):15-31.New York, Springer. 2014.
10. Laskar AR, Gupta VK, Kumar D, Sharma N, Singh MM. Psychosocial effect and economic burden on parents of children with locomotor disability. Indian J Pediatr. 2010;77:529-33.
11. Yıldız D, Tarakçıoğlu MC. Çocuklar için özel gereksinim raporu (ÇÖZGER) almak için başvuran hastaların klinik özellikleri, eş tanılarının incelenmesi, yeni değişen ÇÖZGER yönetmeliğine göre aldıkları tanı ve özür oranlarının eski tanı ve özür oranları ile karşılaştırılması. İstanbul Kanuni Sultan Süleyman Tıp Dergisi. 2020;12:144-50.
12. Güller B, Yaylacı F. Çocuklar için özel gereksinim raporuna geçiş sonrası bir yıllık sağlık kurulu verilerinin değerlendirilmesi. Klinik Psikiyatri Dergisi. 2021;24:207-16.
13. Kayhan M, Öztürk Y. Bir üniversite hastanesine çocuklar için özel gereksinim raporuna başvuran olguların klinik ve sosyodemografik özellikleri. Osmangazi Tıp Dergisi. 2020;42:240-48.
14. Temeltürk RD, Uygun SD, Canlı M, Ayşegül E, Gürel Y, Çetinkaya M et al. Çocuklar için özel gereksinim raporu (çözger)'na başvuran olgularin psikiyatrik tani ve özel gereksinim düzeylerinin önceki yönetmelikteki tani ve özür oranlari ile karşilaştirilmasi: retrospektif çalişma. Acta Medica Nicomedia. 2023;6:148-56.
15. Diagnostic and statistical manual of mental disorders: DSM-5. Washington, American Psychiatric Association. 2013.
16. Turgut S, Erden G, Karakaş S. Özgül öğrenme güçlüğü (ÖÖG) dikkat eksikliği hiperaktivite bozukluğu(DEHB) birlikteliği ve kontrol gruplarının öög bataryası ile belirlenen profilleri. Turk J Child Adolesc Ment Health. 2010;17:13-25.
17. Savasir I, Sezgin N, Erol N. Ankara Gelişim Tarama El Kitabı. Ankara,Türk Psikologlar Derneği. 1994.
18. Ünlü G, Aras Ş, Eminağaoğlu N, Büyükgebiz B, Bekem Ö. Developmental characteristics of children aged 1–6 years with food refusal. Public Health Nurs. 2008;25:2-9.
19. Demir N, Koc A, Üstyol L, Peker E, Abuhandan M. Clinical and neurological findings of severe vitamin B12 deficiency in infancy and importance of early diagnosis and treatment. J Paediatr Child Health. 2013;49:820-24.
20. Arguz Cildir D, Ozbek A, Topuzoglu A, Orcin E, Janbakhishov CE. Association of prenatal attachment and early childhood emotional, behavioral, and developmental characteristics: A longitudinal study. Infant Ment Health J. 2020;41:517-29.
21. Kilicaslan F, Tufan AE. Autism spectrum disorder: Comorbidity and demographics in a clinical sample. Int J Dev Disabil. 2022:1-10.
22. Kara H. Adölesan annelerin sosyodemografik özelliklerinin, anksiyete ve depresyon düzeylerinin değerlendirilmesi: Ağrı ili örneklemi. Selcuk Med J. 2021;37:351-58.
23. Oner N. Examples of Psychological Tests Used in Turkey: A Reference Source (Expanded 2nd Edition). Bogazici University Press. 2008.
24. Uzun Cıcek A, Sarı SA, Mercan Isık C. Sociodemographic characteristics, risk factors, and prevalence of comorbidity among children and adolescents with intellectual disability: a cross-sectional study. J Ment Health Res Intellect Disabil. 2020;13:66-85.
25. Porteus SD. Porteus Maze Tests: Fifty years' application. Pacific Books. 1965.
26. Togrol, B. The application and comparison of the Porteus maze intelligence test with forms 2A and 2B of the RB Cattell intelligence test to 25 female and 25 male Turkish students aged 12.5 years (Uzmanlık tezi). 1972.
27. Korkmazlar Ü. 6-11 yaş İlkokul Çocuklarında Özel Öğrenme Bozukluğu ve Tanı Yöntemleri (Uzmanlık tezi). Istanbul, Sağlık Bilimleri Enstitusu. 1992.
28. Erden G, Kurdoğlu F, Uslu R. Ilköğretim okullarina devam eden Türk çocuklarinin sinif düzeylerine göre okuma hizi ve yazim hatalari normlarinin geliştirilmesi. Turk Psikiyatri Derg. 2002;13:5–13.
29. Gümüş Y, Yürümez E. Assessment of the applications to Kocaeli Derince Research and

Education Hospital in 2012 and 2013 to obtain disabled children's health board report. J Exp Clin Med. 2014;31.
30. Başgül S, Saltık S. Göztepe Eğitim ve Araştırma Hastanesi-Özürlü Çocuk Heyeti'nin 2010 yılı verileri. Göztepe Tıp Dergisi. 2012;27:45-49.
31. Thapar A, Rutter M. Neurodevelopmental Disorders.Rutter's Child and Adolescent Psychiatry : 31-40. Wiley-Blackwell, 2015.
32. Duvekot J, van der Ende J, Verhulst FC, Slappendel G, van Daalen E, Maras A et al. Factors influencing the probability of a diagnosis of autism spectrum disorder in girls versus boys. Autism. 2017;21:646-58.
33. İstatistiklerle Çocuk. https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Cocuk-2021-45633 (accesed January 2023).
34. Yektaş Ç, Kaplan SE. Bir üniversite hastanesi çocuk ergen ruh sağlığı ve hastalıkları birimine başvuran hastaların sağlık kurulu raporlarının değerlendirilmesi. Konuralp Med J. 2017;9:228-32.
35. Şahin N, Altun H, Bilge K. Özürlü çocuk sağlık kurulu raporlarının değerlendirilmesi. Kocatepe Tıp Dergisi. 2014;15:48-53.
36. Kumbul YÇ, Sivrice ME, Vural A. Çocuklar için özel gereksinim raporunda (ÇÖZGER) kulak burun boğaz hastalıklarının önemi ve başvuran hastaların klinik özelliklerinin değerlendirilmesi. Süleyman Demirel Üniversitesi Sağlık Bilimleri Dergisi. 2020;11:348-52.
37. Geçici Koruma. https://www.goc.gov.tr/gecici-koruma5638 (accesed January 2023).
38. Assi R, Özger-İlhan S, İlhan M. Health needs and access to health care: the case of Syrian refugees in Turkey. Public Health. 2019;172:146-52.
39. Baykara-Krumme H. Consanguineous marriage in Turkish families in Turkey and in Western Europe. Int Migr Rev. 2016;50:568-98.
40. Şen ŞR, Hilmiye A. Aydın il merkezindeki 15-49 yaş grubu kadınlarda akraba evliliği sıklığı ve etkileyen faktörler. Florence Nightingale Hemsire Derg. 2015;23:126-35.
41. Galip A. Denizli kırsal kesiminde akraba evliliği ve bunu etkileyen faktörler. Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi. 2000;40:67-80.
42. Büyükavcı R, Büyükavcı MA, Aktürk S. Çocuklar için özel gereksinim raporunda fiziksel tıp ve rehabilitasyon hekiminin rolü. Anadolu Klinigi. 2022;27:275-80.
43. Bitsko RH, Claussen AH, Lichstein J, Black LI, Jones SE, Danielson ML et al. Mental health surveillance among children—United States, 2013–2019. MMWR supplements. 2022;71:1.
44. Antshel KM, Zhang-James Y, Faraone SV. The comorbidity of ADHD and autism spectrum disorder. Expert Rev Neurother. 2013;13:1117-28.
45. Simonoff E, Pickles A, Wood N, Gringras P, Chadwick O. ADHD symptoms in children with mild intellectual disability. J Am Acad Child Adolesc Psychiatry. 2007;46:591-600.
46. Kornø KT, Aagaard L. Off-label prescribing of antipsychotics in a Danish child and adolescent mental health center: A register-based study. J Res Pharm Pract. 2018;7:205.
47. Birnbaum ML, Saito E, Gerhard T, Winterstein A, Olfson M, Kane JM et al. Pharmacoepidemiology of antipsychotic use in youth with ADHD: trends and clinical implications. Curr Psychiatry Rep. 2013;15:1-13.
48. Daniel LT, Gupta S, Sagar R. Effect of educational module on knowledge of primary school teachers regarding early symptoms of childhood psychiatric disorders. Indian J Psychol Med. 2013;35:368-72.
49. Çokamay G, Kapçı EG, Sever M. Okul ruh sağlığı hizmetlerinde yaşanan sorunlar: Psikolojik danışmanların görüşleri. İlköğretim Online. 2017;16:1395-406.
50. Karabina B. Uludağ Üniversitesi Engelli Sağlik Kurulu'na Başvuran Olgularin Retrospektif Değerlendirilmesi (Uzmanlık tezi). Bursa, Uludağ Üniversitesi, 2021.
51. Öktem F. Kısa zeka testleri ve Kaufman kısa zeka testi (KBİT-2). Türkiye Klinikleri J Psychol-Special Topics. 2016;1:10-6.
52. Karadağ Y, Baştuğ G. Türkiye'de zekâ değerlendirme sürecinde yaşanan etik sorunlar ve öneriler. Ankara Sağlık Hizmetleri Dergisi. 2018;17:46-57.
53. Ökten Ş. GAP Bölgesi'nin sosyo-kültürel ve yapısal özelliklerinin aile yapısına etkileri. Journal of Social Policy Studies. 2006;9:23-34.
54. Gopalkrishnan N. Cultural diversity and mental health: Considerations for policy and practice. Front Public Health. 2018;6:179.
55. Hechanova R, Waelde L. The influence of culture on disaster mental health and psychosocial support interventions in Southeast Asia. Ment Health Relig Cult. 2017;20:31-44.
56. May T, Adesina I, McGillivray J, Rinehart NJ. Sex differences in neurodevelopmental disorders. Curr Opin Neurol. 2019;32:622-26.
57. Croen LA, Grether JK, Selvin S. The epidemiology of mental retardation of unknown cause. Pediatrics. 2001;107:86.
58. Özdemir Ö. Çocuklarda mental retardasyon. Güncel Pediatri. 2005;3:62-66.
59. Hassiotis A. Borderline intellectual functioning and neurodevelopmental disorders: prevalence, comorbidities and treatment approaches. Adv Ment Health Intellect Disabil. 2015.