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RESEARCH ARTICLE

CLINICAL CHARACTERISTICS OF CHILDREN AND ADOLESCENTS APPLYING FOR A SPECIAL NEEDS REPORT FOR CHILDREN

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ABSTRACT

Purpose: The aim of this study was to investigate the demographic and clinical characteristics of patients who applied for Special Needs Reports for Children (SNRFC).
Material and Methods: 652 children and adolescents who applied to the medical board of a university hospital for SNRFC between April 2023 and May 2024 were included in the study. Demographic and clinical data were obtained by retrospective file review.
Results: The mean age of the patients was 8.65 ± 4.15 years. The most common diagnosis in the child and adolescent psychiatry area was specific learning disorder (39.2%). When comparing the psychiatric diagnoses of male and female participants, the prevalence of autism spectrum disorders and atypical autism was significantly higher in males than in females. When psychiatric diagnoses are evaluated according to age groups, autism spectrum disorder diagnosis was found to be significantly higher in cases younger than 6 years of age, and delayed milestone and specific learning disorder diagnoses were found to be significantly higher in cases aged 6 years and older.
Conclusion: It is thought that the results of the study will contribute to the clinical approach of physicians working in the field of child and adolescent mental health and diseases in the evaluation process of children who apply to the health board for SNRFC.

Keywords: Child and adolescent psychiatry, special needs, health board

INTRODUCTION

“Special needs” is a concept defined by the World Health Organization in three dimensions: “impairment”, “disability” and “handicap”. Impairment is defined as deficiency and abnormality in physical and psychological functions. Disability is defined as an activity limitation resulting from inadequate functionality, while handicap is characterized as a limitation in expected sociocultural roles based on age and gender due to impairment and disability (1). According to the United Nations Children's Fund (UNICEF) 2021 data, 240 million children worldwide have at least one disability (2). According to data from the Turkish Statistical Institute (TÜİK) in 2011, the prevalence of disability was 2.3% among individuals aged 3-9 years, 2.1% among those aged 10-14 years, and 2.3% among those aged 15-19 years (3). Physical, mental, or sensory disabilities adversely affect the academic and social lives of individuals, creating challenges in nearly every aspect of their daily experiences. These individuals require special support in numerous areas, particularly in education and social interactions, from an early age.

In Türkiye, the assessment of children's special needs is conducted in accordance with the "Regulation on Special Needs Assessment for

Children," published in the Official Gazette on February 20, 2019 (4). The SNRFC is developed based on evaluations by a board comprising at least six permanent physicians, including a specialist in child and adolescent mental health and diseases. During the preparation of this report, all cases presented to the health committee are evaluated by specialists in physical therapy and rehabilitation, ophthalmology, otorhinolaryngology, neurology (pediatrics), and child and adolescent mental health. Following the evaluation, the relevant specialists prepare a report, detailing the medical diagnosis, special needs level, and disability rate of each case, in accordance with the guidelines outlined in Annexes 1, 2, and 3 of the SNRFC regulation. In addition to managing the follow-up and treatment of patients, physicians specializing in child and adolescent mental health have responsibilities that include referring patients to special education programs, determining disability rates, and facilitating access to social and educational rights. Meeting the special education and social support needs of children with special needs promptly and adequately is a critical component of treatment, significantly enhancing therapeutic outcomes (5,6). Therefore, it is imperative that every child and adolescent psychiatry physician possesses comprehensive knowledge of the processes involved in identifying and addressing special needs.

This study aimed to examine the demographic and clinical characteristics of children and adolescents who applied for the SNRFC.

MATERIAL AND METHODS

Participants and Study design

652 children and adolescents aged 0-18 years, who applied to the Sivas Cumhuriyet University Faculty of Medicine, Department of Child and Adolescent Psychiatry between April 2023 and May 2024 to obtain a medical board report, were included into the current research. The sample size was calculated using G*Power (3.1.9.4). The minimum sample size, corresponding to a nominal significance level of $\alpha = 0.05$, a medium effect size of $d = 0.5$, and a power value of $1-\beta = 0.9$, was determined to be 587. After obtaining ethics committee approval, data on the patients' age, gender, reasons for admission, psychiatric diagnoses, additional diagnoses from other departments, and special needs levels were retrospectively extracted from patient files. Patients with unclear diagnostic evaluations, missing psychiatric diagnoses, or incomplete sociodemographic and clinical information were excluded. A total of 667 patient files were accessed, with 15 patients excluded due to missing data.

The evaluation of the disability rates of the patients applying for a medical board report was conducted based on the "Regulation on Special Needs Assessment for Children," published in the Repeated Official Gazette on 20.02.2019 and numbered 30692 (4). Psychiatric evaluations of all children applying to the SNRFC health board committee were conducted by child and adolescent mental health physicians. Intelligence tests were administered to determine the intelligence levels of the cases. The Wechsler Intelligence Scale for Children-Revised (WISC-R) was used for children over 6 years old, whereas the developmental levels of children under 6 years old were assessed using the Ankara Developmental Screening Inventory.

Ethical Considerations

Ethics committee approval for the research was received from Sivas Cumhuriyet University Non-Interventional Clinical Research Ethics Committee (Date: 16.05.2024, Decision No: 2024/05-22).

Measures

Sociodemographic and Clinical Data Form

In this form prepared by the researcher, information such as the patient's age, gender, reason for application to the health board, psychiatric diagnosis, other medical diagnoses, level of special needs, and duration of the special needs report was collected.

Wechsler Intelligence Scale for Children-Revised (WISC-R)

The validity and reliability studies of the test in Turkish, originally developed by Wechsler in 1949, were conducted by Savaşır and Şahin (1995) (7). The test evaluates two primary domains, verbal and performance, with each domain consisting of 6 subtests, totaling 12 subtests. It is designed for administration to children and adolescents aged 6-16.

Ankara Developmental Screening Inventory

It is an assessment test developed by Savaşır et al. (1998) to determine the general developmental level of infants and children aged 0-6 years (8). Consisting of 154 items, the total scores of the test reflect the general developmental level. The AGTE has 4

Table 1. Diagnostic distribution and application patterns of cases in child and adolescent psychiatry and other medical areas

	SNRFC Diagnostic Area		Application Patterns		
	n	%	First report (N=234) n (%)	Objection (N=5) n (%)	Renovation (N=185) n (%)
Child and Adolescent Psychiatry Area (N=424)					
Delayed Milestone	132	31.1	50 (21.4)	1 (20)	81 (43.8)
Autism Spectrum Disorders	44	10.3	19 (8.1)	0 (0.0)	25 (13.5)
Atypical Autism	79	18.6	40 (17.1)	0 (0.0)	39 (21.1)
Specific Learning Disorder	166	39.2	122 (52.1)	4 (80)	40 (21.6)
Attention Deficit Hyperactivity Disorder	1	0.2	1 (0.4)	0 (0.0)	0 (0.0)
Bipolar Affective Disorder	2	0.5	2 (0.9)	0 (0.0)	0 (0.0)
Language-Speech-Communication Development Area (N=166)					
Other Developmental Disorders of Speech and Language	115	69.3			
Specific Speech Articulation Disorder	48	28.9			
Stuttering	3	1.8			
Other Medical Diagnosis Areas (N=153)					
Nervous System	7	4.6			
Endocrine System	104	67.9			
Hereditary-Congenital Diseases	11	7.2			
Hearing Function-Ear Nose, Throat	17	11.1			
Visual Function	4	2.7			
Movement Development	7	4.6			
Digestive System	3	1.9			

SNRFC: Special Needs Reports for Children

subtests: language-cognitive, fine motor, gross motor, social skills and self-care.

Statistical Analysis

All data were analyzed using Statistical Package for Social Science (SPSS) Windows version 24.0 software. Results of nominal data were reported as number (n) and percentage (%). Chi-square test was used to compare categorical data between independent groups. A p value <0.05 was accepted for statistical significance.

RESULTS

The mean age of the patients was 8.65 ± 4.15 years and 242 (37.1%) were female and 410 (62.9%) were male. Analysis of the types of applications to the health committee for the SNRFC revealed that 460 cases (70.6%) were "first report" applications, 187 cases (28.7%) were "report renewal" applications, and 5 cases (0.8%) were "objections" to previous SNRFC reports. Table 1 provides a detailed breakdown of the application types for cases diagnosed in the area of child and adolescent psychiatry. The reasons for application indicated that 513 cases (78.7%) sought "special education," 136 cases (20.9%) aimed for "social rights and tax reduction," and 3 cases (0.5%) were related to a "traffic accident."

In the "Regulation on the Evaluation of Children's Special Needs", psychiatric disorders in children and adolescents are defined under the headings "Child and Adolescent Psychiatry Area", and speech and language developmental disorders are defined under the headings "Language-Speech-Communication Development Area" (4). The findings were evaluated under similar subheadings.

Analysis of the diagnostic fields indicated that 327 cases (50.2%) had diagnoses solely in child and adolescent psychiatry, 221 cases (33.9%) had diagnoses in speech-language-communication and other medical fields, and 97 cases (15.0%) had diagnoses in both child and adolescent psychiatry and speech-language-communication. Furthermore, 6 cases (0.9%) had no medical issues. The most frequent psychiatric diagnosis in child and adolescent psychiatry was specific learning disorder [n=166 (39.2%)], whereas the most common non-psychiatric medical disorder was endocrine system diseases [n=104 (32.6%)] (Table 1).

Analyzing the distribution of diagnoses in the area of child and adolescent psychiatry according to the type of presentation, it was found that specific learning disorder was the most common diagnosis among patients applying to the health board for the SNRFC for the first time [n=234 (55.2%)], with 122 cases (52.1%). Among the 5 cases (1.2%) who applied for

Table 2. Special needs levels and disability ratios in SNRFC

Special need levels	n	%	Disability rate (%)
Have special needs (HSN)	286	43.9	20-39
Mild HSN	35	5.4	40-49
Moderate HSN	43	6.6	50-59
Very advanced HSN	11	1.7	70-79
Prominent HSN	2	0.3	80-89
Have special conditions needs (HSCN)	265	40.6	90-99
No special needs	10	1.5	-

Table 3. Comparison of diagnoses in child and adolescent psychiatry in area of gender

Child and Adolescent Psychiatry Area	Girl n (%)	Boy n (%)	p
Delayed Milestone	55 (36.2)	77 (28.3)	
Autism Spectrum Disorders	9 (5.9)	35 (12.9)	
Atypical Autism	13 (8.6)	66 (24.3)	
Specific Learning Disorder	73 (48.0)	93 (34.2)	0.000**
Attention Deficit Hyperactivity Disorder	1 (0.7)	0 (0.0)	
Bipolar Affective Disorder	1 (0.7)	1 (0.4)	

*p < 0.05, **p < 0.001; Chi-square test

Table 4. Comparison of diagnoses in child and adolescent psychiatry according to age groups

Child and Adolescent Psychiatry Area	Under 6 years old n (%)	6 years and older n (%)	p
Delayed Milestone	25 (29.8)	107 (31.5)	
Autism Spectrum Disorders	29 (34.5)	15 (4.4)	
Atypical Autism	30 (35.7)	49 (14.4)	
Specific Learning Disorder	0 (0.0)	166 (48.8)	0.000**
Attention Deficit Hyperactivity Disorder	0 (0.0)	1 (0.3)	
Bipolar Affective Disorder	0 (0.7)	2 (0.6)	

*p < 0.05, **p < 0.001; Chi-square test

an appeal, 1 case (20%) had a diagnosis of delayed milestone, and 4 cases (80%) had a diagnosis of specific learning disorder (Table 1).

The special needs levels of the cases were determined as specified in the SNRFC guideline (Annex 3). Analysis of the special needs levels revealed that the most frequent diagnosis was "have special needs (HSN)," with 286 cases (43.9%). The second most frequent diagnosis was "have special conditions needs (HSCN)" with 265 cases (40.6%). Table 2 presents the special need levels of the cases along with their corresponding disability rates as outlined in the SNRFC guideline.

A statistically significant difference was observed between male and female patients in the field of child and adolescent psychiatry concerning psychiatric diagnoses ($p < 0.001$). Specifically, the prevalence of autism spectrum disorders and atypical autism was significantly higher in male patients compared to female patients (Table 3).

A significant difference was observed in psychiatric diagnoses when cases within the area of child and adolescent psychiatry were divided into two groups: those under 6 years of age and those 6 years and older ($p < 0.001$). Autism spectrum disorder diagnoses were significantly higher in patients under 6 years of age, while diagnoses of delayed milestones and specific learning disorders were significantly higher in patients aged 6 years and older (Table 4).

DISCUSSION

The current study examined the age, gender, application patterns, and child and adolescent psychiatry as well as other medical diagnoses of children and adolescents who applied for the SNRFC report at the health board of a university hospital, yielding significant findings.

The analysis revealed that the mean age of the children and adolescents applying for the SNRFC report was 8.65 ± 4.15 years, with a gender distribution of 242 (37.1%) females and 410 (62.9%) males. In a study conducted by Yıldız and Tarakçıoğlu (2020), it was determined that the average age of the cases applying for SNRFC was 8 ± 4 years old, 33.7% were female and 67.3% were male (9). Likewise, Kayhan and Öztürk (2020) found a mean age of 9.10±4.60 years, with 37.8% females and 62.2% males (10). The results of this study regarding age and gender distribution are consistent with these studies. The predominance of males in the sample, similar to other studies, may be attributed to the higher prevalence of certain psychiatric disorders requiring special needs, such as autism spectrum disorder and specific learning disorder, among males.

In the current research, the analysis of the reasons for applying for the SNRFC evaluation revealed that the most common reason was special education, accounting for 78.7% of applications. The second most frequent reason was for social rights and tax reduction, comprising 20.9% of applications. Şahin et

al. (2014) similarly found that the predominant reason for applying for disability health board reports was special education, at 81.8% (11). Kayhan and Öztürk (2020) also reported comparable findings, with 52.4% of SNRFC applications being for obtaining a special education report (10). These findings are consistent with the literature. Since special education support is a fundamental requirement for many psychiatric disorders requiring special needs, such as delayed milestones, autism spectrum disorders, and specific learning disorders, it is expected that the most common reason for applying for SNRFC is special education.

The analysis of the diagnostic distribution of patients applying to the health board for SNRFC revealed that child and adolescent psychiatry was the most prevalent diagnostic area. Specifically, 327 (50.2%) patients received only psychiatric diagnoses, while 424 (65.0%) received both psychiatric and other medical diagnoses. These findings align with other studies conducted on children applying to the health committee for SNRFC (9-11). These results emphasize the need for child and adolescent psychiatry physicians to possess the necessary competencies in the evaluation process within their field.

The distribution of diagnoses in the area of child and adolescent psychiatry revealed that the most common diagnosis was specific learning disorder [n=166 (39.2%)], followed by delayed milestone [n=132 (31.1%)]. In a study by Yıldız and Tarakçıoğlu (2020), specific learning disorder was also found to be the most common diagnosis among patients applying for SNRFC, with a prevalence of 27% (9). However, other studies on the subject have identified delayed milestone as the most common diagnosis (10-13). This inconsistency may be attributed to the average age of the sample group, as specific learning disorder is most frequently diagnosed during the school-age period (14). In this study, the mean age of subjects was 8.6 years, a critical period for diagnosing specific learning disorder and initiating special education interventions.

The analysis revealed that the most common initial report among cases diagnosed in the area of child and adolescent psychiatry was specific learning disorder [n=234 (55.2%)]. Specifically, 52.1% of these initial report applications were for specific learning disorder. Additionally, 5 cases (1.2%) applied as objections, with 4 (80%) of these objecting cases having previously received a report diagnosing specific learning disorder. Considering the average age of the cases, it is anticipated that specific learning disorder would be the most prevalent diagnosis at the initial presentation. Güller and Yaylacı (2021) reported an objection rate of 0.6%, whereas Temeltürek et al. (2023) found an objection rate of 2.1%. (12,13). These results suggest that patients may seek SNRFC not only to obtain a special needs report but also to contest previous diagnoses and reports.

Analysis of the special needs levels of the cases revealed that the most frequently reported level was "have special needs" (HSN), with 286 cases (43.9%). Terzioğlu et al. (2022) also identified HSN as the most commonly determined level of special need in patients presenting for SNRFC, at 40.3% (15). Similarly, Güller and Yaylacı (2021) found that the most frequent level of special need was HSN (48.2%) (12). These findings align with our study's results. The SNRFC classifies disability severity as "HSN," "Mild HSN", "Moderate HSN," "Very advanced HSN," "Prominent HSN," and "have special conditions needs (HSCN)". Severe disability is indicated by the classifications of very advanced HSN, prominent HSN, and HSCN. According to the SNRFC regulation, the disability rate for the diagnosis of specific learning disorder is categorized as HSN. The predominance of HSN in this study may be attributed to the high prevalence of specific learning disorder among the patients.

In this study, a comparative analysis of the diagnoses in the field of child and adolescent psychiatry revealed that the prevalence of autism spectrum disorder and atypical autism was significantly higher in males than in females. Consistent with our findings, Yıldız and Tarakçıoğlu (2020) and Temeltürk et al. (2023) also reported a significantly higher incidence of autism spectrum disorder in males compared to females (9,13). Autism spectrum disorder is a disorder that is more common in men (16). The results of the current study corroborate these findings.

An analysis of the diagnostic areas in child and adolescent psychiatry, stratified by age groups, revealed that diagnoses of autism spectrum disorder were significantly more prevalent in children under 6 years of age, whereas delayed milestone and specific learning disorder were significantly higher in cases aged 6 years and older. The mean age at diagnosis for autism spectrum disorder typically ranges between 38 and 120 months (17). In a meta-analysis

by van't Hof et al. (2021), the average age at diagnosis for autism spectrum disorder was reported to be 43 months (31-75 months) (18). Although the specific age at diagnosis was not determined in this study, the high number of cases diagnosed with autism spectrum disorder before the age of 6 years is likely related to these age-related diagnostic patterns. Similarly, specific learning disorder is typically diagnosed during school years, which explains the higher prevalence of this diagnosis in the 6 years and older age group (14). Delayed milestone diagnoses correspond to "delay in cognitive development" and "mental retardation" in the SNRFC. While mental retardation may manifest as developmental delay in early childhood, the definitive diagnosis is often made during school years (19). The elevated rate of delayed milestone diagnoses in the patients aged 6 years and older is likely attributable to the timing of diagnostic clarity.

Limitations

A significant limitation of this study is its retrospective design, which relies on previously recorded data. Additionally, the diagnostic evaluation of the cases was not conducted using a structured clinical interview, which is another notable limitation. Furthermore, the research data were obtained from cases that applied to the health board at a single center, which may limit the generalizability of the findings.

CONCLUSION

The findings of this study provide valuable insights into the clinical characteristics of cases that applied to the health committee for the SNRFC. Physicians specializing in child and adolescent mental health should be thoroughly knowledgeable about the SNRFC and adhere to current regulations when assessing the needs of children with special requirements in education, social rights, and other areas. It is thought that this study will contribute to the clinical approach of physicians in the field of child and adolescent mental health, particularly in evaluating children who apply to the health board for the SNRFC.

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