

# Symptoms and Diagnoses of Patients Referring to a Child and Adolescent Psychiatry Polyclinic

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## ÖZET

Çocuk ve ergen psikiyatrisi polikliniğine başvuran hastalarda belirti ve tanı dağılımları

**Amaç:** Çalışmamızda çocuk ve ergen psikiyatrisine başvuran hastaların belirti ve tanı dağılımlarının saptanması amaçlanmıştır.

**Yöntem:** Süleyman Demirel Üniversitesi Tıp Fakültesi Çocuk ve Ergen Psikiyatrisi Polikliniğine Ekim 2007 - Ekim 2008 tarihleri arasında başvuran 763 olgunun dosyası geriye dönük olarak incelenmiştir.

**Bulgular:** Olguların çoğunluğunun 7-12 yaş grubundaki erkekler olduğu belirlenmiştir. Olguların %93.8'i uzun zamandır devam eden kronik sorunlar için başvuruda bulunmuştur. En sık görülen belirtinin (%34.2) sinirlilik olduğu tesbit edilmiştir. Diğer belirtiler arasında, erkeklerde dikkat dağınıklığı, kekemelik, derslere ilgisizlik; kızlarda ise aileyle ilişki sorunu, mutsuzluk-karamsarlık-isteksizlik, bunaltı-sıkıntı-huzursuzluk, fiziksel yakınmalar, özyıkım girişimi, alışkanlıklar, takıntılı düşünce ve davranışlar anlamlı düzeyde fazla oranda bulunmuştur. En sık görülen tanılar, sırasıyla, depresyon, anksiyete bozuklukları, enürezis, dikkat eksikliği, hiperaktivite bozukluğu, uyum bozukluğu, ilişki sorunları, kekemelik ve mental retardasyondur. Olguların %25'i birden fazla tanı almıştır. Tanıların cinsiyete göre dağılımı değerlendirildiğinde; DEHB ve kekemeliğin erkeklerde, depresyon ve ilişki sorunlarının kızlarda anlamlı düzeyde fazla olduğu görülmüştür.

**Sonuç:** Çalışmamızda en sık saptanan tanılar içe vurum bozuklukları olmakla birlikte, cinsiyetler arası farklılıklar gözlenmektedir. Eşitliği oranı da dikkate değer düzeyde saptanmıştır. Eşitlikte hastalığın şiddeti daha ağır olmakta, psikososyal işlevsellikte daha ciddi bozulmalar görülmektedir. Çocuk-ergen psikiyatrisi başvurularında cinsiyetler arası tanı farklılıkları ve eşitlikte dikkate değerlendirilmelidir. Olguların çoğunluğunun kronik sorunlar için çocuk psikiyatrisine başvurduğu tespit edilmiştir. Başvuru süresinin uzaması ve tedavinin gecikmesi belirtilerinin ağırlaşmasına neden olabilir. Eşitlikte birliktelikleri değerlendirildiğinde, depresif bozukluğun en sık ilişki sorunları ile birlikte görüldüğü saptanmıştır. Depresif bozukluk tanısı konulan olgularda ailevi ve sosyal ilişkilerin de değerlendirilmesinin uygun olacağı düşünülmektedir.

**Anahtar kelimeler:** Çocuk, ergen, belirtiler, tanılar

## ABSTRACT

Symptoms and diagnoses of patients referring to a child and adolescent psychiatry polyclinic

**Objective:** The aim of the present study is to identify the complaints and diagnoses of patients who referred to a child and adolescent psychiatry polyclinic.

**Method:** Medical records of 763 patients referred to the Children and Adolescent Psychiatry Polyclinic at Süleyman Demirel University Faculty of Medicine between October 2007 and October 2008 were studied retrospectively.

**Results:** Most of the patients were male and within 7 to 12 years of age. 93.8% of the patients referred to the hospital for chronic conditions persisting for a long time. The most common symptom was nervousness (34.2%). The symptoms of inattentiveness, stuttering, disinterest to school lessons were more frequent among boys and problems in family relations, unhappiness-pessimism-unwillingness, distress-annoyance-discomfort, physical complaints, suicidal attempts, habits, obsessed thoughts and behaviors among girls. The most common diagnosis was depression, followed by anxiety disorders, enuresis, attention deficit hyperactivity disorder, adjustment disorder, relationship problems, stuttering and mental retardation, respectively. Of the cases, 25% were diagnosed with multiple conditions. When the distribution of the diagnoses to sex were assessed, ADHD and stuttering were more frequently diagnosed among boys, on the other hand, depression and relationship problems among girls.

**Conclusions:** In our study, although the internalizing disorders are the most frequent diagnoses, there are differences between genders. The rate of comorbid diagnosis was found to be considerable. In the presence of comorbid diagnoses, the disorder is experienced more heavily and psychosocial functionality gets deteriorated. Diagnostic differences between sex and comorbidity must be assessed carefully in child and adolescent psychiatry polyclinics. It is observed that most of the cases do refer to child psychiatry polyclinic for chronic problems. Prolonged referral period and delay in treatment may cause symptom worsening. When comorbid diagnosis coexistences were evaluated, it is observed that depressive disorder was mostly observed to coexist with relationship problems. It is considered to be important to evaluate family relations and social relations when patients with depressive disorder diagnoses are concerned.

**Key words:** Child, adolescent, symptoms, diagnosis

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## INTRODUCTION

Most mental disorders that begin during childhood persist for a lifetime. Mental disorders cause greater loss of function as the child develops and can continue to cause trauma in adulthood (1,2). In Turkey, the percentage of clinical mental problems in the 4 to 18 age group, as far as stated by parents, is 11.3 % (3). Studies abroad report that between 9.5% - 19.8% of children and adolescent have been diagnosed with psychiatric disorders (4-7).

In a study conducted by Steinhausen, it was reported that common diagnoses made in child and adolescent psychiatry differ by age, problematic behaviors are frequently observed in patients between the ages of 8 and 9 and in adolescence, and that the male to female ratio is 2 to 1 (8). Observational studies carried out in the field of child psychopathology over the past 20 years have shown that issues such as age, gender, birth order, family size, financial status of the family, complications during pregnancy, stressful life events, and so on are factors causing behavioral problems in children (1).

Only between 10% and 22% of children with psychiatric problems who were referred to primary healthcare services are diagnosed properly by primary healthcare service staff, suggesting that a large majority of children and adolescents do not have access to necessary mental health services. And what is worse, a group defined as “subthreshold”, which experiences mental health problems without proper diagnosis, suffers from a lack of any mental health support. Most mental health problems in children and adolescents, however, can be cured with suitable treatment and these children and their families can lead a normal or near-normal life. As long as children and adolescents with mental diseases lack proper treatment and support, their problems will persist and will endanger their social, educational, and professional futures – resulting in an additional financial burden on families and a less productive society (9).

In a study conducted abroad, it was reported that the most common diagnoses in children and adolescents referred to a child psychiatry polyclinic

are elimination disorders (attention deficit disorder, hyperactivity disorder, attention deficit hyperactivity disorder (ADHD)/conduct disorder) followed by internalizing disorders (depression/anxiety disorder) (10). A study in Turkey has reported that ADHD was diagnosed in 17.8% of males and 4.6% of females. In terms of internalizing disorders, depression was detected in 11.3% of females and 6.7% of males, whereas anxiety disorder was detected in 12.7% of females and 7.1% of males (11).

The conditions in which children’s mental health problems occur, clinical symptoms, and methods of consulting mental health facilities may differ among countries and within a given country (11). A study carried out in Spain has shown that for 73% of cases, families themselves referred to a clinic (12), whereas a study carried out in Australia stated that 66% of children referred to a mental health clinic were actually sent from other healthcare services in an effort to obtain a consultation (13).

Determining the distribution and extent of mental problems in children provides the basic data needed to pin down the areas requiring protective measures and treatment services. Through establishing the primary needs, effective programs can be developed for the improvement of children’s mental healthcare services (11).

The objective of this study is to examine the diagnoses and symptoms that were ascertained using the socio-demographic features of patients who were referred to the Children and Adolescent Psychiatry Polyclinic at the Süleyman Demirel University Faculty of Medicine.

## METHOD

In this study, 763 cases of children and adolescents who were referred to the Süleyman Demirel University Faculty of Medicine, Child and Adolescent Psychiatry Polyclinic for the first time between October 2007 and October 2008 have been evaluated retrospectively. Thirty-five patients were excluded from the study due to a lack of information. Socio-demographic features were recorded in the standard sections of patients’ medical files, while family characteristics, complaints,

and psychiatric diagnoses made during the research conducted in accordance with the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM IV) were evaluated. In the study, the distribution of the symptom and diagnosis features of participating children and adolescents was examined by gender.

### Statistical evaluations

The data was evaluated using SPSS 11.0 (Statistical Package for the Social Sciences) software. Number, % age, and standard deviation were used in supplemental statistics. Data were analyzed using the Chi-square Test, Fisher's Exact Chi-square Test, multi-leveled chi-square test, and chi-square for trend. In all evaluations,  $p < 0.05$  was considered significant.

## RESULTS

The characteristics of children and families in the evaluation group are provided in Table 1. In the evaluation group, 64.6% ( $n=493$ ) of participants were male and 35.4% ( $n=270$ ) were female; 43.3% of the female and 47.5% of the male participants were in

the 7-12 age group. The ratio of female patients in the 13-17 age group was significantly above that of male patients ( $p=0.01$ ). In 94 of 763 cases whose family characteristics were recorded, patients were living in an environment without the presence of one or both parents. The reasons therefore were specified as divorce ( $n=66$ ), loss of parent ( $n=9$ ), adoption ( $n=15$ ), and dormitory residency ( $n=4$ ). The majority of patients were first born and more than half of the cases came from families with two children. The average age among mothers was  $35.1 \pm 6.2$  years and the average age among fathers was  $38.9 \pm 6.9$  years. More than half of the mothers (56.6%) and fathers (52.3%) were in the 30 to 39 age group. The level of education and profession of mothers and fathers are provided in Table 2. In 51.4% of cases, mothers brought their children to a polyclinic while in 33.6 % of cases both parents brought their children to a polyclinic; most lived in urban regions (79.6%); the majority of patients were breastfed (93.2%); 13.2 % of patients were exposed to trauma during birth; and 11.5% of patients were exposed to eclampsia. It was also revealed that 25% of mothers, 11.8% of fathers, and 21.2% of other relatives of the patients had a history of psychiatric treatment.

**Table 1: Information about children and families in the study group**

Categories	n=763	%
Gender		
Male	493	64.6
Female	270	35.4
Age group		
1-6 years	251	32.9
7-12 years	351	46.0
13-18 years	161	21.1
Number of children in family		
Single child	156	20.4
Two siblings	409	53.6
Three siblings	164	21.5
Four siblings	22	2.9
Five siblings	7	0.9
Six siblings or more	5	0.7
Birth order in the family		
1 <sup>st</sup> born	426	55.8
2 <sup>nd</sup> born	250	32.8
3 <sup>rd</sup> born	65	8.5
4 <sup>th</sup> born	16	2.1
5 <sup>th</sup> born	5	0.7
6 <sup>th</sup> born	1	0.1

**Table 2: Education levels and professions of children's parents in the study group**

	Mother		Father	
	(n=763) n	%	(n=763) n	%
Education Level				
None	13	1.7	6	0.8
Elementary	365	47.8	225	29.5
Secondary school	47	6.2	94	12.3
High school	208	27.3	209	27.4
College	130	17	229	30
Profession				
Housewife	564	73.9	-	-
Clerk	41	5.4	106	13.9
Labor	39	5.1	168	22
Retired	10	1.3	51	6.7
Farmer	2	0.3	27	3.5
Teacher	38	5	45	5.9
Self-employed	14	1.8	245	32.1
Nurse	41	5.4	-	-
Military officer	1	0.1	43	5.6
Lawyer, doctor, engineer	13	1.7	55	7.2
Unemployed	-	-	23	3

\* self-employed: chauffeur, tradesmen, accountant, hairdresser, building contractor

Eighty-six point six % of patients came from Isparta, 7.3% from Burdur, and 4.2% from Afyon.

An examination of records about the onset of the disorder showed that 93.8% of patients were referred to a polyclinic for chronic problems, 5.4% for problems that had occurred within the last month, and 0.8% for problems that occur intermittently. An examination of complaints during visits revealed that 65.7% of cases (n=501) had more than 1 symptom.

The ratio of reporting more than 1 symptom during the visit does not differ significantly between genders. Patients showing 1 symptom in the 1-6 age group is significantly higher than in the other age groups ( $p < 0.001$ ). The most common symptoms were irritability (34.2%), unhappiness-pessimism-unwillingness (27%), distress-annoyance-discomfort

(18.7%), inattentiveness (18.1%), hyperactivity (by 17.4%), and bedwetting (by 11.5%). Among complaints made during visits, those of inattentiveness, stuttering, and lack of interest in schoolwork were high in male patients; those of family problems, unhappiness-pessimism-unwillingness, distress-annoyance-discomfort, physical complaints, suicidal attempts, addictions, and obsessive thoughts and behaviors were high in female patients (Table 3).

Ninety-seven patients had normal characteristics, while 666 patients (87.3%) recorded at least 1 symptom. The most common diagnosis in all groups were depression, anxiety disorders, enuresis, attention deficit hyperactivity disorder (ADHD), adjustment disorder, relationship problems, stuttering, and mental retardation. An examination of the gender-based

**Table 3: Complaints during visits**

Complaints	Male (n=493)		Female (n=270)		$\chi^2$	p
	n	%	n	%		
Irritability	171	34.7	90	33.3	0.142	0.71
Unhappiness-pessimism-unwillingness	112	22.7	96	35.6	14.499	<0.001
Distractibility	110	22.3	28	10.4	16.793	<0.001
Discomfort-distress-restlessness	82	16.6	61	22.6	4.069	0.04
Enuresis	54	11.0	34	12.6	0.459	0.49
Hyperactivity	49	9.9	17	6.3	2.930	0.08
Failure in schoolwork	49	9.9	17	6.3	2.930	0.09
Stuttering	40	8.1	9	3.3	6.634	0.01
Sleeping problems	38	7.7	25	9.3	0.457	0.46
Destructive behavior, running away from home, skipping school, stealing	37	7.5	15	5.6	1.044	0.31
Family problems	36	7.3	33	12.2	5.134	0.02
Various phobias	36	7.3	22	8.1	0.178	0.67
Addictions, masturbation, thumb-sucking						
nail-biting, hair-pulling	33	6.7	32	11.9	5.956	0.02
Speech impediment	30	6.1	12	4.4	0.903	0.34
Twitching	27	5.5	11	4.1	0.725	0.39
Soiling underpants	26	5.3	11	4.1	0.544	0.46
Indifference to schoolwork	25	5.1	4	1.5	6.148	0.01
Physical complaints, stomachache, fainting	24	4.9	28	10.4	8.316	0.004
Problems with reading, writing and mathematics	18	3.7	5	1.9	1.932	0.17
Self-harming behavior	16	3.2	14	5.2	1.738	0.19
Articulation disorder	16	3.2	7	2.6	0.254	0.61
Obsessive thinking and behavior	16	3.2	18	6.7	4.796	0.03
Friendlessness, shyness	14	2.8	15	5.6	3.519	0.06
Eating disorder	13	2.6	13	4.8	2.514	0.11
Refusal to go to school	12	2.4	11	4.1	1.605	0.21
General growth deficiency	10	2.0	7	2.6	0.255	0.61
Bizarre behavior, refusing to connect and communicate	10	2.0	8	3	0.661	0.42
Suicide attempt	8	1.6	15	5.6	9.230	0.002
School/teacher adaptation problem	6	1.2	6	2.2	1.139	0.28
Sexual abuse*	1	0.2	1	0.4	-	1.00
Substance abuse*	1	0.2	1	0.4	-	1.00
Sexual identity problem*	1	0.2	2	0.7	-	0.28

\* Fisher's exact chi-square test

**Table 4: Distribution of diagnoses according to gender**

(DSM IV) Diagnoses	Male (n=493)		Female (n=270)		$\chi^2$	p
	n	%	n	%		
Attention deficit hyperactivity disorder (ADHD)	78	15.8	14	5.2	18.613	<0.001
Depression	61	12.4	59	21.9	11.826	0.001
Enuresis nocturna	48	9.7	30	11.4	0.359	0.54
Anxiety disorders	42	8.5	34	12.6	3.227	0.07
Adjustment disorders	41	8.3	23	8.5	0.009	0.92
Stuttering	40	8.1	9	3.3	6.634	0.01
Relationship problems	27	5.5	25	9.3	3.930	0,04
Tic disorders	26	5.3	10	3.7	0.957	0.32
Encopresis	26	5.3	11	4.1	0.544	0.46
Oppositional defiant disorder (ODD)	23	4.7	6	2.2	2.848	0.09
Mental retardation	22	4.5	17	6.3	1.210	0.27
Social phobia	20	4.1	11	4.1	0.000	0,99
Articulation disorder	15	3.0	7	2.6	0.126	0.72
Obsessive compulsive disorder (OCD)	13	2.6	13	4.8	2.514	0.11
Enuresis diurna	9	1.8	11	4.1	3.455	0.06
Delay in starting to speak due to lack of stimulants*	8	1.6	2	0,7	-	0,51
Autism*	8	1.6	1	0.4	-	0.17
Borderline intellectual functioning	7	1.4	8	3.0	2.155	0.14
Specific phobia*	7	1.4	2	0.7	-	0.50
Separation anxiety disorder	5	1.0	4	1.5	0.327	0.57
School phobia*	5	1.0	3	1.1	-	1.00
Post-traumatic stress disorder*	5	1.0	1	0.4	-	0.43
Conduct disorder*	5	1.0	1	0.4	-	0.43
Low average intelligence*	4	0.8	2	0.7	-	1.00
Adolescence period characteristics*	4	0.8	2	0.7	-	0.91
Psychosis*	3	0.6	4	1.5	-	0.25
Conversion disorder*	3	0.6	6	2.2	-	0.07
Pervasive developmental disorders (PDD)*	2	0.4	2	0.7	-	0.61
Selective mutism *	2	0.4	1	0.4	-	1.00
Substance use disorder*	1	0.2	1	0.4	-	1.00
Sexual identity disorder*	1	0.2	1	0.4	-	1.00
Sleep terror*	1	0.2	4	1.5	-	0.56

\* Fisher's exact chi-square test

distribution of diagnosis of the DSM IV shows that ADHD and stuttering are diagnosed at a significant level in many male patients, whereas depression and relationship problems are diagnosed at a significant level among many women (Table 4). One hundred and ninety-one of 763 cases (25%) had more than one diagnosis. An examination of the multiple diagnoses in frequently found disorders, the most common comorbid diagnoses in children with ADHD are mental retardation (14.1%), enuresis nocturna (9.8%), borderline intellectual functioning (6.5%), oppositional defiant disorder (ODD) (4.3%). The most common comorbid diagnoses in children with depression are relationship problems (10.8%), social phobia (8.3%); the most common comorbid diagnoses in children with anxiety disorder are enuresis (9.2%), stuttering (3.9%), twitching disorder (3.9%), and depression

(3.9%). The most common comorbid diagnoses in children with enuresis nocturna are encopresis (26.9%), enuresis diurna (16.7%), ADHD (11.1%) and articulation disorder (9%).

The diagnoses, which were made according to complaints mentioned during visits, were evaluated (Table 5). Adjustment disorder, relationship problems, and ODD were diagnosed at a significantly high level in a great number of patients who had complaints of irritability. In patients with unhappiness-pessimism-unwillingness complaints, however, anxiety disorder, social phobia, obsessive compulsive disorder, separation anxiety disorder, post-traumatic stress disorder, and panic disorder were diagnosed at a significant level.

ADHD, ODD, borderline intellectual functioning, anxiety disorder, and learning disorder were diagnosed at a significant level in a great number of patients who

**Table 5: Diagnoses according to complaints reported during referrals**

Complaint during referral	Diagnosis	Diagnosis in children with complaints			
		n	%	$\chi^2$	p †
Irritability	Adjustment disorder	32	12.3	7.742	0.005
	Relationship problems	28	10.7	9.563	0.002
	ODD	23	8.8	27.249	<0.001
Unhappiness-pessimism-unwillingness	Depression	111	53.4	305.636	<0.001
	Adjustment disorder	44	21.2	6.644	<0.001
	Relationship problems	27	13.0	17.117	<0.001
	Social phobia	15	7.2	7.273	0.007
Distress-annoyance-discomfort	Anxiety disorder	42	29.4	73.926	<0.001
	Social phobia	28	19.6	108.715	<0.001
	Stuttering	15	10.5	4.845	0.028
	ODD	11	7.7	9.816	0.004
	Separation anxiety	7	4.9	20.843	<0.001
Inattentiveness	ADHD	80	58.0	334.919	<0.001
	ODD	9	6.5	3.411	0.06
	Borderline intellectual functioning *	8	5.8	-	0.002
	Anxiety disorder	6	4.3	5.918	0.02
	Learning disorder*	2	1.4	-	0.003
Hyperactivity	ADHD	72	54.1	268.954	<0.001
	Mental retardation	17	12.8	19.540	<0.001
	ODD	11	8.3	8.802	0.003
Bedwetting	Enuresis nocturna	77	87.5	647.247	<0.001
	Encopresis*	21	23.9	-	<0.001
	Enuresis diurna*	20	22.7	-	<0.001
	Articulation disorder*	7	8.0	-	0.009
	Fixed normal intelligence*	3	3.4	-	0.023

\* Fisher's exact chi-square test

†The p values observed when comparing the diagnosis ratio between children with complaints and children without complaints

ADHD: Attention Deficit Hyperactivity Disorder

ODD: Oppositional Defiant Disorder

had attention deficit complaints, whereas ADHD, mental retardation, and ODD were diagnosed at a significant level in a great number of patients with hyperactivity complaints. Enuresis nocturna, encopresis, enuresis diurna, articulation disorder, and low average intelligence were diagnosed at a significant level in a great number of patients with bedwetting complaints.

## DISCUSSION

Male patients are brought to child mental health facilities more frequently than female patients (15). Studies conducted in three different child psychiatry clinics show that in between 61.5% and 66.9% of cases, the patients are males (15-17). In a study conducted in the USA in 2000, 60.8% of a total of 40,639 children who received mental healthcare were

male patients (18). In studies conducted in England and Spain, the majority of children who were referred to a children and adolescent psychiatry clinic were male (12,19). In existing studies, some authors claim that in the general population, the referral of male patients to a mental health clinic is linked to their slow physiological growth. In this study, the majority (64.6%) of patients are male. In a study conducted by Tannöver et al., it is stated that the most frequent visitors were in the 6-11 age group, whereas in our study the age group with the highest number of referrals was the 7-12 age group.

A study conducted in Trabzon that evaluated referrals to child psychiatry clinics revealed that 41.1% of patients were from families with 2 children and 32% of those brought as patients were first born. In our study, 53.6% of patients were from families with 2 children and that 55.8% of those brought as patients were first born. In a study conducted by Tannöver et al.,

51% of mothers and 52% of fathers had an elementary school education (15). In our study, 47.8% of mothers had an elementary school education and 57.4% of fathers were high school or university graduates; this indicates that the difference in education levels might stem from the social structure of Trabzon and Isparta.

Two studies conducted in Norway and Spain showed that the main reasons for patients' referral to a child and adolescent clinic were anxiety and adolescent problems, and that hyperactivity and attention deficit problems had a tendency to increase (12,20). In our study, the most frequent reasons for referral to a clinic were found to be irritability, unhappiness, distress, inattentiveness, and hyperactivity. In line with the literature, a great number of problems such as inattentiveness, stuttering, and lack of interest in schoolwork were observed at significant levels in male patients, and problems such as unhappiness-pessimism and unwillingness were observed at significant levels in female patients in our study (11,15).

In a study by Fettahoğlu and Özatalay, it was revealed that 52 children and adolescents referred to a clinic with inattentiveness and/or hyperactivity were diagnosed with ADHD, depression, anxiety disorder, and learning disorder (21). In our study, children and adolescents referred to a clinic with inattentiveness and/or hyperactivity were diagnosed with ODD, borderline intellectual functioning, anxiety disorder, learning disorder, and mental retardation.

In a study analyzing the clinical and demographic features of children and adolescents referred to a child psychiatry clinic, it was reported that the most common diagnosis was mood disorders, followed by conduct disorder (22). In a study that evaluated the distribution of diagnoses in children and adolescents between 1995 and 2000, depression and anxiety disorders were observed to have increased (18). In our study, the most common diagnoses were depression and anxiety disorders.

In a study conducted in Iraq, the second most common diagnosis was enuresis (23). In two studies conducted in Turkey, one of the most common diagnoses was elimination disorders (11,24). In our study, enuresis was the third most common disorder

after depression and anxiety disorder. Because enuresis is a disease that affects the family and child's quality of life quite negatively, it can be considered to have gained a higher rank in terms of referrals to child psychiatry clinics.

Externalizing disorders and communication problems, which include ADHD, were more often seen in male patients than in female patients (11,21,24-26). In a study carried out outside of Turkey, disruptive behavior disorders were detected three times more often in male patients than in female patients (27). Female patients were diagnosed more often with mood disorders and anxiety disorders, whereas disruptive behavior disorders were diagnosed less often (21,28). In a study carried out in Iraq in 2007, stuttering was observed more often in male patients than in female patients (23). A great number of problems such as ADHD and stuttering were observed at significance levels in male patients, while depression and relationship problems were observed in female patients in our study, which is in line with the literature.

In a study carried out by Görker et al. on adolescents, the most frequent comorbid diagnosis with ADHD was borderline intellectual functioning (29). In our study, however, the most frequent comorbid diagnosis occurring with ADHD was mental retardation. The disorders commonly co-occurring with enuresis were developmental delay, sleeping disorders, ADHD, and encopresis (30). The diseases found in our study to co-occur with enuresis nocturna were, in order, encopresis, enuresis diurnal, and ADHD, which supports the literature. In a study conducted in Turkey, it was reported that patients diagnosed with mental retardation had comorbidity most frequently with elimination disorders (29), while in our study enuresis had comorbidity most frequently with elimination disorders. Depression rates were low in children and adolescents with anxiety disorders according to the literature (31,32), whereas in our study depression rates were 3.9% in children and adolescents with anxiety disorders.

In a study conducted by Aras et al., the rate of comorbid diagnoses was 28.7% (11). In another study carried out in Turkey, the rate of comorbid diagnoses

was 15.29% (26), whereas in another study conducted abroad this figure was reported at 29.9% (23). The level of severity of a disease, and its likelihood of becoming chronic, increases with the occurrence of comorbid diagnoses. The quality of life is much lower in cases of comorbidity, and deterioration in psychosocial functioning is much more serious (33). In our study, comorbid diagnoses were observed in 25% of patients, and thus the existence of comorbid diagnoses should be taken into consideration in referrals to child psychiatry.

## CONCLUSION

In our study, two thirds of referrals to child psychiatry clinics were for male patients. Many referrals to child psychiatry clinics are made in the 7-12 age group. This study revealed that although the most common diagnoses are internalizing disorders,

differences between the genders exist and the rate of comorbidity is significant. When making referrals to child-adolescent psychiatry, differences in diagnoses and comorbid diagnoses among the genders should be examined very carefully. The majority of cases referred to child psychiatry were for chronic problems. Extending the referral period and delays in treatment can cause the symptoms to worsen. An evaluation of the co-occurrences of comorbidities showed that depressive disorder coexisted predominantly with relationship problems. Family and social relations should be evaluated in cases diagnosed with depressive disorder. Our study's findings related to common psychiatric diagnoses provide us with the basic data to determine treatment needs, which can in turn enable the establishment of guidelines to organize child psychiatry polyclinic services and improve protective measures.

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