

*PSYCHIATRIC DISORDERS IN CHILDREN AND
ADOLESCENTS ATTENDING PSYCHIATRY
OUTPATIENT CLINIC AT AL ZAHRAA UNIVERSITY
HOSPITAL*

By

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ABSTRACT

Background and aim of the work: *Psychiatric disorders are widespread and affect not only adults, but children and teenagers as well. In the trend of these psychological conditions, the age factor plays an important role. The goal of our research was to establish the trend of psychiatric morbidity in children and adolescents attending the outpatient clinic at Al Zahraa University Hospital.*

Subjects and Methods: *This is a cross-sectional study was carried out during the period from July 2017 to February 2018 including 325 patients recruited from the Psychiatric Outpatient Clinic at Al Zahraa University Hospital, Cairo, Egypt. After a comprehensive clinical review, the state of mental health and psychological morbidity was evaluated. A clinical psychologist tested the intelligence quotient when necessary. All the diagnoses were made on the basis of Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revised criteria (DSM IV-TR).*

Results: *The majority of patients were in the 6-12 age group(73%). Boys (67 %) dominated girls (33%).the most common diagnoses were Attention-deficit hyperactivity disorder (37%) and mental retardation (18%), followed by Major depressive disorder (13%). In relation to gender, Attention deficit hyperactivity disorder (ADHD), Disruptive behavior disorder (DBD), Pervasive developmental disorder (PDD), Major depressive disorder (MDD) and Obsessive compulsive disorder (OCD) were significantly different according to gender.*

Conclusion: *Our findings indicate the need for efficient hospital-based program, through screening, effective referral, and subsequent management that can enhance early detection and management of psychiatric disorders among children and adolescents.*

Keywords: *psychiatric morbidity, Child and adolescent, outpatient.*

INTRODUCTION

Age plays a major role in the clinical profile trend of psychiatric disorders (Kessler et al., 2005).

Children can also be affected by disorders affecting adults, (Srinath et al., 2005) although other particular groups of disorders are generally diagnosed in children and adolescents.

Mental retardation (MR), psychological development disorders (e.g., particular learning disorders, autism disorders), and behavioral and emotional disorders usually found in childhood or adolescence (e.g., hyperkinetic disorders, enuresis) (Regmi et al., 2002).

Various reports show that approximately one out of every three to four teenagers is estimated to fulfill criteria for diagnosis of psychiatric disorders according to Diagnostic and Statistical Manual of Mental Disorders (DSM III) (Costello et al., 2004).

The estimated prevalence of child and adolescent mental illnesses in the Eastern Mediterranean region was 10%-36%, which is close to or slightly higher than the global estimates (WHO, 2010).

Childhood mental disorders can continue without early and successful diagnosis and

interventions and contribute to a downward spiral of school failure, poor job prospects and adult poverty. The World Health Organization noted that information on the prevalence and burden of psychological and behavioral disorders is lacking in all countries, particularly in developing countries (WHO, 2001).

SUBJECTS AND METHODS

This was a cross-sectional, descriptive study conducted over a span of 8 months, from July 2017 to February 2018, among patients attending the outpatient psychiatry clinic at Al-Zahraa University Hospital, Cairo, Egypt. The study population was comprised of children and adolescents aged 6-18 years, of both sexes.

Inclusion criteria:

1. Age ranges between 6 and 18 years old.
2. Both sexes were included.

Exclusion criteria:

1. Those who did not fulfill the criteria of DSM 4th Edition, Text Revision (DSM-IV TR).
2. Patients with severe medical condition.

Financial Disclosure /Funding:

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Ethical consideration:

1. The aim of the study was explained to the parents of each participate before collection of data.
2. Verbal consent was taken from parents of each participate in the study.
3. Privacy of all data was assured.
4. An approval of the local ethical committee in the faculty and university was obtained before this study.
5. The patient has the right to withdraw from the study at any time.

At the start of study, an explanation of the study was provided, as well as details of participation, to ensure the potential participant had adequate information to provide informed consent.

All patients included in the study were subjected to the following:

1. Socio-demographic characteristics including: age, gender, mother education, father education, mother

occupation, family status, history of birth complications, delayed developmental milestones, past history of chronic medical disease, family history of psychiatric disorder.

2. A comprehensive clinical review including general, abdomen, chest and heart examination.
3. A clinical psychologist measured the intelligence quotient (IQ) when appropriate.
4. All the diagnoses of psychiatric disorders were made according to DSM-IV TR criteria.

Statistical analysis:

Qualitative data were expressed as frequency and percentage. All statistical analyses were performed using GraphPad Prism software version 8 (GraphPad Software, Inc., La Jolla, CA, USA). Independent-samples t-test was used when comparing two means. Chi-square (χ^2) test was used to compare proportions between qualitative parameters. P-value was considered significant at P -value < 0.05 , highly significant at P -value < 0.001 , insignificant at P -value > 0.05 .

RESULTS

Among 377 patients who diagnosis and were included in attended our outpatient clinic, the study.
325 received DSM-IV TR

Table (1): Socio-demographic Profile of the sample

	Number of patients (325)	(%)
Age		
- 6-12yrs	236	(73%)
- 13-18	89	(27%)
Gender		
- Male	219	(67%)
- Female	106	(33%)
Mother education		
- Illiterate	98	(30%)
- Primary	76	(23%)
- Preparatory	75	(23%)
- Secondary	45	(14%)
- Higher education	31	(10%)
Father education		
- Illiterate	20	(6%)
- Primary	69	(21%)
- Preparatory	58	(18%)
- Secondary	110	(34%)
- Higher education	68	(21%)
Family status		
- Both parent	195	(60%)
- Single parent	130	(40%)
Mother occupation		
- Housewife	238	(73%)
- Working	87	(27%)
History of birth complications		
- Yes	22	(7%)
- No	303	(93%)
History of delayed developmental milestones		
- Yes	25	(8%)
- No	300	(92%)
Past history of chronic medical disease		
- Yes	16	(5%)
- No	309	(95%)
Family history of psychiatric disorder		
- Yes	49	(15%)
- No	276	(85%)

This table shows that most patients belonged to the age group of 6-12 years (73%); boys (67%). 30% of the mothers were illiterate but only 6% of the fathers were illiterate. 40% of the patients, their parents were not living together and 73% of them, their mothers were housewife.

Only 7% have history of birth complications, 8% delayed developmental milestones, 5% have past history of chronic medical illness (DM, Hypertension, hepatic and renal) and 15% have family history of psychiatric disorders.

Tables (2): Psychiatric disorders in our patients

Psychiatric disorders	Number of patients	(%)
ADHD	119	(37%)
- Hyperactive type	27	(8.5%)
- Inattentive type	8	(2.5%)
- Combined	84	(26%)
MR	60	(18%)
- Below average IQ	12	(3.3%)
- Mild	22	(7%)
- moderate	17	(5%)
- severe	9	(2.7%)
Disruptive behavior disorder	26	(8%)
- Conduct disorder	12	(3.7%)
- Oppositional defiant disorder	14	(4.3%)
Pervasive Developmental disorder (PDD)	9	(2.8%)
Learning disabilities	20	(6%)
Psychogenic nocturnal enuresis	15	(5%)
Major depressive disorder	41	(13%)
Anxiety	15	(4.6%)
Obsessive compulsive disorder	14	(4%)
Schizophrenia	2	(0.6%)
Tic disorder	4	(1%)
Total	325	(100%)

This table shows that Attention-deficit hyperactivity disorder (ADHD) was the most frequent diagnosis, occurring in

37% of the patients, followed by MR which occurred in 18%. 13% had major depressive disorder (MDD).

Table (3): Correlation between psychiatric disorders and gender in the studied group

Psychiatric disorders	Male N (219)	Female N (106)	X ²	P value	
ADHD	99	20	21.35	<0.0001****	HS
MR	38	22	0.5	0.5	NS
Conduct disorder	12	0	6	0.014*	S
ODD	12	2	2.237	0.134	NS
PDD	9	0	19.12	<0.0001****	HS
LD	14	6	0.066	0.79	NS
NE	10	5	0.0039	0.95	NS
MDD	13	28	27.17	<0.0001****	HS
Anxiety	8	7	1.413	0.23	NS
OCD	6	8	4.005	0.045*	S
Schizophrenia	2	0	0.97	0.32	NS
Tic disorder	3	1	0.107	0.74	NS

X² = chi square test. P < 0.05 = statistically significant, p < 0.01 = statistically highly significant, p > 0.05 = statistically insignificant.

This table shows that there is a significant increase of ADHD, conduct and PDD in male than female, while MDD and OCD

are significant affected in female than male. Other psychiatric disorders affected both gender with no significant difference.

DISCUSSION

Mental disorders in children and adolescents are undoubtedly ubiquitous and burdensome. These conditions are usually emotional, behavioral, or developmental (Murry et al., 2008).

Most patients in our study were aged 6–12 years (73%), a finding similar to other hospital-based studies (Chadda and Saurabh, 1994; Malhotra and Chaturvedi, 1984). The under-representation of adolescents in the sample (27%) may reflect defiance among this

age group and their refusal to come to a psychiatric clinic.

Our results replicate several previous studies which found that, boys were referred to child psychiatric outpatient clinics twice as frequently as girls (Qureshi, 1988). This is in agreement with many other previous hospital-based studies (Regmi et al., 2000; Shrestha, 1986). This may reflect the actual higher prevalence of behavioral problems among boys and may also reflect the cultural tendency to give more attention to males than to females.

As regard the education of mother, 30% of them were illiterate and 23% were primary educated this in agreement with **Arroyo-borrell. et al., (2017)** who revealed that the risk of a child suffering from mental health disorders increases when their mother had low level of education or illiterate also the same results in Other researchers (**Rahi et al., 2005; Merikangas et al., 2010**) who have observed significantly higher prevalence of the psychopathological disorders in children of illiterate mothers. This may be explained by the fact that education and awareness increases mothers' perception of any developmental or behavioral deviance of the child at an earlier stage when it is still amenable to prevention and/or treatment so when a mother has attained a high level of education, this significantly reduces the probability of a child having mental health problems.

In our study about 73% of mothers were housewife and this was in concordance with **Rajmil et al., (2015)** who stated that the risk of children suffering from mental health problems is higher if their mothers are unemployed.

As indicated in this study, 15% of the children have family history of psychiatric history, This was in

accordance with many studies who found that family psychiatric disorder can have a potential impact on children by affecting several aspects of children's development, including their physical, cognitive, social, emotional, and behavioral development (**Barnes and Stein, 2000; Murray and Cooper, 2003**). Also, a number of genetic and environmental mechanisms are important in linking family history of psychiatric disorder to children's difficulties.

ADHD was the most frequent diagnosis in 37% of our patients. Mostly the combined type. **Jayaprakash, (2012)** found externalizing disorders in 34.09%, with 29.01% having pure hyperkinetic disorder. The studies also reported a high clinical prevalence of up to 50% for ADHD (**Vogel and Holford, 1999; Staller, 2006; DeBar et al., 2003**). To the contrary lower prevalence was found in many studies as the prevalence of ADHD based on the DSM-IV criteria was found to be 6.9% among primary school children in a study held on Menoufia governorate, Egypt (**Farahat et al., 2014**). Also another study done in Suez Canal University Hospital found the prevalence to be 13.6% (**Magda et al., 2000**). This difference may be attributed

to the difference between community based sample versus hospital based one as in our study.

Our study showed that 119 (37%) patients with ADHD, 99 (90%) were boys and 20 (10%) were girls. This was consistent with the findings of other studies **Sarwat et al., (2009)**, **Staller, (2006)**, **Chaudhury et al., (2007)** which have found externalizing disorders more common in boys.

MR was the second most frequent diagnosis 18%, most of them were mild MR. Our results were consistent with study of **Staller, (2006)** in outpatient child psychiatry who found a high frequency of mild MR in his study.

Out 60 (18%) patients with MR, 38 (62.4%) were boys and 22 (37.6%) were girls, many studies based on patients with MR have consistently shown boys to have a higher prevalence of MR than girls (**Kolvin et al., 1977**; **McLaren and Bryson, 1987**; **Munro, 1986**).

As regard Disruptive behavior disorders (DBD), oppositional defiant disorder (ODD) was found in 4.3%, and conduct disorder (CD) was found in 3.7% of patients. A higher incidence was found in the study of **Mullick and Goodman, (2005)** who reported a prevalence of 5.9% for ODD, 14%

for CD, which can be explained by the study location, a slum area, in which children and adolescents might be more vulnerable to social threats such as a lack of parental support, low socioeconomic status, and easy access to crime. The depicted lower prevalence of DBD in our study may also be due to the ignorance of the family members to recognize the symptoms of ODD or CD as illness and behavioral disorders were noticed less by the parents and caregivers and may not be considered as disorder for getting medical support.

PDDs were found in 2.8% of our patients. All of them were boys having autistic disorder. **Vogel and Holford, (1999)** found that around 5% of their cases had PDD, while **Staller, (2006)** found PDD in 6% of his cases. One reason for the low rate of PDD in our study could be the limited services to such patients in the hospital and parents prefer to go to specialized schools.

MDD was found in 13% of the cases. Studies have found varying rates of mood disorders in children attending the outpatient clinics, ranging from 3% to 26%. (**Vogel and Holford, 1999**; **Staller, 2006**) Depression is being diagnosed increasingly in children, which is reflective of a worldwide trend toward an earlier diagnosis and

early treatment of depression. With regard to sex distribution, depression was more common in females than males. This was compatible with clinical studies that have found girls more frequently having depression than boys (**Chadda and Saurabh, 1994; Staller, 2006**).

Anxiety and Obsessive-compulsive disorder (OCD) were found in 4.6%, 4% of the patients in our study respectively. This was comparable to the study done by **Jesmin et al., (2016)** who found that OCD was estimated in 2.5%. This low prevalence can be explained that anxiety disorders usually remain undiagnosed in children and adolescents owing to the internalized nature of their symptoms.

CONCLUSION

This study shows that a large number of children are suffering from psychiatric disorders:

1. Most of them were in the age group of 6-12 years old.
2. Boys were more affected than girls.
3. They have various psychiatric disorders with predominant ADHD and MR.
4. ADHD and MR are more common in boys but MDD and OCD more common in girls.

RECOMMENDATION

From this study we recommend:

1. Increase the focus on mental health prevention, promotion and education.
2. Increase the focus and service offerings for children and young people with mental illness that can help early intervention and enables children and young people to start treatment as soon as possible.
3. Also, in order to make efficient use of resources and to organize child psychiatric services for the future, models of treatment, care and liaison with teachers and pediatricians need to be established.

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الاضطرابات النفسية لدى الأطفال والمراهقين في العيادة الخارجية للطب النفسي بمستشفى الزهراء الجامعي

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الهدف من البحث: تنتشر الاضطرابات النفسية ولا تصيب البالغين فقط ، بل تؤثر أيضاً على الأطفال والمراهقين. في اتجاه هذه الظروف النفسية، يلعب عامل العمر دوراً مهماً. كان الهدف من بحثنا هو تحديد اتجاه الاضطرابات النفسية لدى الأطفال والمراهقين الذين يترددون على العيادة الخارجية في مستشفى الزهراء الجامعي.

تصميم البحث: تم إجراء هذه الدراسة خلال الفترة من يوليو 2017 إلى فبراير 2018. تم اخذ 325 من العيادة الخارجية للأمراض النفسية في مستشفى جامعة الزهراء، القاهرة، مصر، تم تقييم حالة الامراض والاضطرابات النفسية. تم إجراء جميع التشخيصات على أساس الدليل التشخيصي والإحصائي للاضطرابات العقلية، الإصدار الرابع، مراجعة النص.

معايير الاشتمال:

1. يتراوح العمر بين 6 و 18 سنة.

2. تم تضمين كلا الجنسين.

معايير الاستبعاد:

1. أولئك الذين لم يحصلوا على تشخيص الاضطرابات النفسية من أساس الدليل التشخيصي والإحصائي للاضطرابات العقلية، الإصدار الرابع، مراجعة النص.
2. المرضى الذين يعانون من حالة طبية خطيرة.

نتائج البحث: كان غالبية المرضى في الفئة العمرية 6-12 (%73). زاد عدد الأولاد (%67) على البنات (%33)، وكان التشخيص الأكثر شيوعاً هو اضطراب نقص الانتباه وفرط النشاط (%37) والتخلف العقلي (%18)، يليه اضطراب الاكتئاب الشديد (%13). فيما يتعلق بالجنس، كان اضطراب فرط الحركة ونقص الانتباه، واضطراب السلوك التخريبي، واضطراب النمو الشامل، واضطراب الاكتئاب الشديد واضطراب الوسواس القهري مختلفاً بشكل كبير وفقاً للجنس.

الاستنتاجات: تشير النتائج التي توصلنا إليها إلى أن عددا كبيرا من الأطفال يعانون من اضطرابات نفسية:

1. كان معظمهم في الفئة العمرية 6-12 سنة.
2. تأثر الأولاد من الاضطرابات النفسية أكثر من الفتيات.
3. اضطراب نقص الانتباه وفرط الحركة من أكثر الاضطرابات انتشاراً.

4. يكثر اضطراب نقص الانتباه وفرط الحركة والتأخر العقلي في الاولاد بينما يكثر اضطراب الاكتئاب والوسواس القهري لدي الفتيات.

التوصيات:

1. زيادة التركيز على الوقاية من الصحة النفسية وتعزيزها وتثقيفها.
2. الحاجة إلى برنامج فعال قائم على المستشفى، من خلال الفحص والإحالة الفعالة والإدارة اللاحقة التي يمكن أن تعزز الكشف المبكر عن الاضطرابات النفسية وتدريبها بين الأطفال والمراهقين.
3. زيادة التركيز وعروض الخدمات للأطفال والشباب المصابين بأمراض نفسية والتي يمكن أن تساعد في التدخل المبكر الذي يمكن الأطفال والشباب من بدء العلاج في أسرع وقت ممكن.
4. أيضا، يجب وضع نماذج للعلاج والرعاية والاتصال مع المعلمين وأطباء الأطفال، من أجل الاستخدام الفعال للموارد وتنظيم خدمات الطب النفسي للأطفال في المستقبل.