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Prevalence of Attention Deficit Hyperactivity Disorder and Conduct Disorder among a School-based Sample of Palestinian Children in the Gaza Strip

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مدى انتشار اضطرابات تشتت الانتباه و فرط الحركة، والمسلك في عينة من طلاب المدارس الفلسطينين في قطاع غزة

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Abstract

Aim: The present study investigated prevalence of attention deficit hyperactivity disorder (ADHD) and conduct disorders among Palestinian children in the south Gaza Strip. **Methods:** Three hundred and eighty eight participants (194 boys, 194 girls), aged 12 to 15 years (*M*=13.5 years), were selected from eight governmental and United Nations Relief and Works Agency (UNRWA) preparatory schools. A self-report questionnaire, including socio-demographic scale, was completed. Teachers and parents completed the Structured Clinical Interview for DSM-IV diagnosis of ADHD while parents and their children completed a conduct disorder scale. **Results:** Parents reported 4.4% of children fulfilled the full criteria of ADHD combined type. According to teachers, 9.8% fulfilled the full criteria of ADHD combined type. ADHD combined type symptoms were higher in boys than girls. Children in governmental schools had more ADHD combined type than in UNRWA schools according to teachers who also rated children living in families with low family monthly income as having more ADHD. Parents reported 15.7% of children had conduct disorder while 17.5% of children self-reported the condition. Boys self-reported had higher levels of conduct disorder than girls, which supported parent ratings. Regarding comorbidity, 6.7% of children rated by parents had inattentive disorder and conduct; 5.2% of children had both conduct and hyperactivity-impulsivity disorder; and, 3.4% had both combined ADHD and conduct disorder. **Conclusion:** Findings confirmed a strong relationship between ADHD and conduct disorder and provided specific data on the prevalence in Palestinian children in the Gaza Strip. Such findings highlight the need to establish psychosocial rehabilitation programs in schools and community-based centers so children and their families can learn to overcome the adverse impact of such disorders on psychosocial development and academic achievement. Psychoeducation for parents and teachers should focus on early detection of behavioral problems and of alternatives approaches such as behavior modification to deal with such problems.

Key words: ADHD, Children, Conduct disorder, south Gaza Strip

Declaration of interest: None

Introduction

Children and adolescents face a variety of life challenges, which may place them at risk of developing emotional and behavioral problems. In some cases, behavioral or emotional problems may be triggered by the stress or difficulties in schools or they may be a contributing factor to poor achievement in school or to learning difficulties[1]. Attention deficit hyperactivity disorder (ADHD) is one of the most investigated and controversial disorders in children. ADHD is characterized by pervasive and impairing symptoms of inattention, hyperactivity, and impulsivity according to the Diagnostic and Statistical Manual of Mental Disorders[2, 3].

Generally, the prevalence of ADHD has been reported as ranging from 2.2% to 17.8%, with higher rates in boy

than girls and younger children having higher rates than older children and adolescents[4].

The Arab world has only recently begun to conduct ADHD prevalence studies on children and adolescents.

A study of 1,350 primary schoolchildren aged 8 to 13 years, conducted in Egypt, used the Conners' Rating Scale completed by teachers and parents (no cutoff reported). Results revealed prevalence rates for ADHD symptoms averaged 7.48% (11.67% for boys and 3.58% for girls)[5]. A cross-sectional study in Qatar of 1,541 primary schoolchildren aged 6 to 12 years[6] demonstrated that 14.1% of boys and 4.4% of girls scored more than the cutoff for ADHD symptoms, giving an overall prevalence of 9.4% for ADHD in the school setting. A further two cross-sectional studies were conducted in the Sultanate of Oman: one with elementary school girls aged 6 to 13 years (n= 708)[7] and another with elementary school boys aged 6 to 14 years (n= 1,502)[8]. Both studies yielded a prevalence of ADHD symptoms among Omani schoolgirls and schoolboys of 5.1% and 7.8%, respectively. In another study of 1,502 Omani schoolboys screened for ADHD, 7.8 % exhibited hyperactivity, which was strongly associated with indices of conduct disorder, poor school performance, and behavioral disorders, such as aggression, stealing, and lying[9].

Several studies in the Palestinian territories assessed ADHD prevalence rates. A random sample of 200 children, aged between 6 – 15 years, from 15 United Nations Refugee and Work Agencies (UNRWA) schools in Gaza and 150 children from eight schools in Bethlehem and East Jerusalem (West Bank) were selected. According to parents, 8.4% of children from Gaza fulfilled the full criteria for ADHD combined type compared with 2.7% from the West Bank. According to teachers, 5.2% of children from Gaza fulfilled the full criteria for combined ADHD type compared with 3.3% of children from West Bank[10]. A recent review of all ADHD epidemiological studies conducted in the Arab world found rates ranging from 5.1% to 14.9% in the school setting among Arab students[11].

A study of 410 children, aged 6 to 17 years, showed 31.3% met the criteria for inattentive type, 36.3% were impulsive, and 29% met criteria for combined type, according to parent reports. Child self-reports showed 28.8% met the criteria for inattentive type, 37.3% were impulsive, and 28.3 % met criteria for combined type[12].

A study in Lebanon of 1,000 children, aged between 6 and 10 years, found prevalence of ADHD Inattentive subtype of approximately 0.3%, Hyperactive-Impulsive subtype of 1.2%, and ADHD Combined subtype of 1.7%. ADHD was significantly more prevalent in boys (4.5%) than in girls (1.8%) [13].

Conduct disorder involves a repetitive, persistent pattern of antisocial behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated[2]. As in the DSM-IV-TR (APA 2000)[2], in the DSM-5[3], conduct disorder will be defined on the basis of the presence of three of 15 criteria, present in the last 12 months, of which one must have been present in the past six months. These 15 behavioral criteria can be categorized into four generalized behavioral subtypes: (1) aggression towards people and animals, (2) destruction of property, (3) deceitfulness or theft and (4) serious violations of rules[3]. With respect to comorbidity, ADHD is a complex and heterogeneous disease. ADHD is frequently accompanied by oppositional defiant (ODD) and conduct disorder (CD). About 50% of children with ADHD also show ODD or CD[14].

The most recent Global Burden of Disease Study (GBD 2010) included attention-deficit/hyperactivity disorder (ADHD) and conduct disorder (CD) for burden quantification. The epidemiological profiles of ADHD and CD across three time periods for 21 world regions showed that male prevalence of CD in 2010 was 3.6% (3.3–4.0) while female prevalence was 1.5% (1.4–1.7) [15].

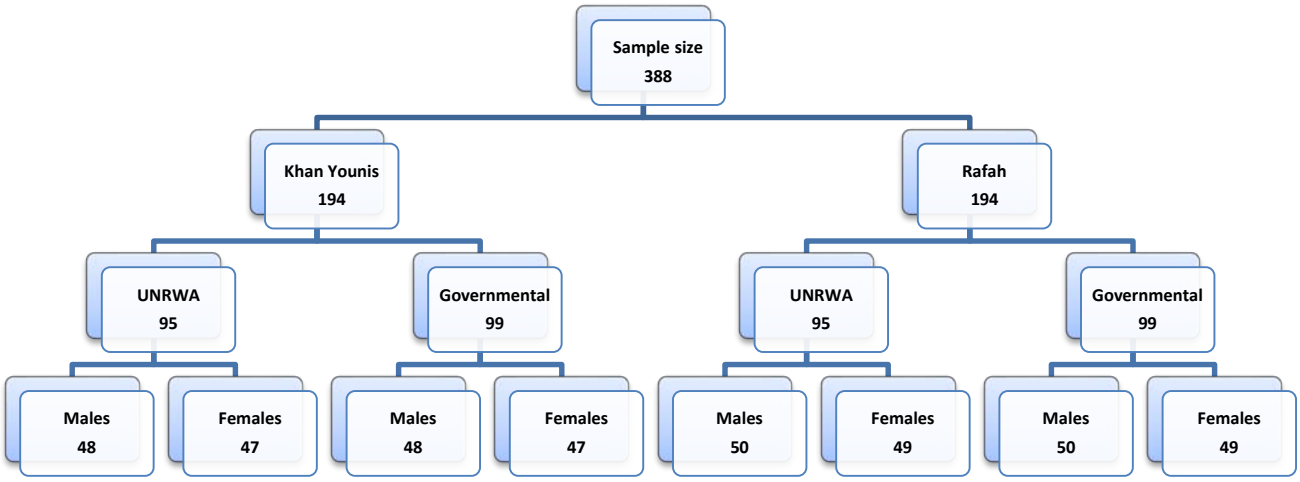
The aim of the present study was to assess the prevalence of attention deficit hyperactivity and conduct disorders among Palestinian children in in south of Gaza Strip.

Methodology

Subjects

A random cluster sampling was used to select 388 children aged between 12 to 15 years, admitted in governmental and UNRWA schools in two districts south of Gaza Strip (Khan Younis and Rafah area) by random draw. In each district, four schools (two boys and girls schools) were selected by random draw and three classrooms within each school were randomly selected. From each class, 16 children were selected randomly from the class registration book.

Diagram "1" Sampling process



Instruments

Sociodemographic questionnaire

A parent questionnaire was devised specifically for the present study in order to obtain information about the participants, including gender, age, number of siblings, birth order, health problems, area of residence, family income, maternal age, maternal education, and maternal occupation.

ADHD-Rating Scale–IV 2 Arabic version – Parents and Teachers forms[10]

ADHD-RS-IV is a questionnaire originally based on DSM-IV criteria and frequently used in epidemiological studies. It contains questions that correspond to nine symptoms of inattention and nine symptoms of hyperactivity/impulsivity in the DSM-IV. The ADHD-RS-IV was designed for parents or teachers to rate the frequency of a child's symptoms on a scale of 0 to 3 with 0 = never or rarely, 1 = sometimes, 2 = often, 3 = very often. Children scoring six and above in inattentive nine items are considered inattentive; children reporting 6 or more in hyperactivity-impulsive 9 items are considered hyperactive-impulsive. Children were classified as ADHD Combined subtype if they met the criteria for inattention and hyperactivity, e.g. six or more in both, on both versions. The Arabic version of this scale was before in the same area for parents scale, the internal consistency of the scale, calculated using Cronbach's Alpha was (0.84); the split half reliability of the scale was (0.79). While, for teachers, internal consistency of the scale, calculated using Cronbach's Alpha was (0.87); the split half reliability of the scale was (0.84).

Conduct Disorder Rating Scale (CDRS) for parents and self [2, 3]

The CDRS items consist of symptoms of CD and are evaluated using Likert-type scales that range from 0 (never) to 4 (daily). Separate versions of the CDRS were used for parents and self. The parent and self-versions lists all 15 symptoms of CD described in the DSM-IV. Children scoring three or more symptoms are considered to have conduct disorder. The Arabic version of the scale was translated and back translated and sent to the relevant experts for validity. All items were agreed without amendment; only the item "Has forced someone into sexual activity" was omitted. In the present study for parents scale, internal consistency of the scale, calculated using Cronbach's Alpha was high (0.70); the split half reliability of the scale was (0.73). While, for children, internal consistency of the scale, calculated using Cronbach's Alpha was (0.71); the split half reliability of the scale was (0.68).

Study procedure

An approval letter allowing the researchers to conduct the present study was obtained from an ethics committee within the Ministry of Health. The researchers trained a team of four mental health professionals to help in data collection. Data collection was carried out by four trained psychologists and social workers under the supervision of the second author. They were trained for six hours in data collection and interviewing techniques. The purpose of the study was explained after which school headmasters were invited to select randomly from the registration book the number of children already prepared in a list for sampling. Children and teachers completed self-administered questionnaires at schools with assistance from the researchers. Following written parent consent, children were invited to participate in the present study. Questionnaire were completed at home and returned to school the next day. Completion of self-report measures took at least 20 minutes for each child. Sociodemographic information was collected from the children and their parents. Of the total children of 416 who were contacted, 388 agreed to participate in the study, following informed consent from their parents, with a response rate of 93%.

Data analysis

Data was entered using the statistical Package for Social Sciences (SPSS) version 18. Descriptive statistics including frequencies for socio-demographic variables, including gender, age, place of residence. Independent T test was used to find differences in ADHD or CD and two groups such as gender. One way ANOVA test was used to evaluate the statistical differences between the mean of total scores of ADHD or CD and its subscales according to more than two independent variables, such as type of residence, number of siblings, family income, parent education and work status. Pearson correlation test was used to demonstrate the relationship between ADHD and conduct disorder.

Results

Socio-demographic results of the study sample

As shown in Table 1, the total number of children selected for the current study was 388 children. The total numbers of boys was 194 (50.0%); and 194 were girls (50.0%). The age ranged from 12 - 15 years (M = 13.72, SD= 0.90). According to school, 198 participants were enrolled in governmental schools (51.0%) with190 enrolled in UNRWA schools (49.0%).

Table 1: Sociodemographic characteristics of the sample (N= 388)

Variable	N	%
1. Gender		
Males	194	50
Females	194	50
2. Type of school	388	100
Governmental schools	198	51
UNRWA schools	190	49
3. Class		
7th Class	127	32.7
8th Class	129	33.2
9th Class	132	34
4. Type of residence		
City	104	26.8
Camp	250	64.4
Village	34	8.8
5. Number of siblings		
4 or fewer	29	7.5
5-7 siblings	141	36.3
8 and above	218	56.2
6. Family monthly income		
600 and less NIS	196	50.5
601-1000 NIS	51	13.1
1001-1500 NIS	59	15.2
1501 NIS and above	82	21.1
7. Paternal education		
Less than secondary school	224	62.9
Diploma	47	12.1
University	75	19.3
Postgraduate	22	5.7
8. Maternal education		
Not educated	315	81.2
Diploma	38	9.8
University	33	8.5
9. Father's work		
Unemployed	185	47.7
Employee	116	29.9
Worker	53	13.7
Skilled worker	14	3.6
Others	20	5.2
10. Mother's work		
House wife	344	88.7
Civil employee	44	11.3

Prevalence of ADHD according to parents and teachers

As shown in Table 2, 66 participants were rated by parents as inattentive (17.0%), 32 were hyperactive-impulsive (8.2%), and 17 were combined type (4.4%). While, 109 participants were inattentive (28.1%) by teachers, 71 were hyperactive-impulsive (18.3%), and 38 were combined type (9.8%). Chi square test showed that teachers significantly rated children in all ADHD scales more than parents ($\chi^2 = 6.7$, df =1, p = 0.01).

Table 2: Prevalence of ADHD according to parents and teachers

Variable	Parents report		Teachers report	
	N	%	N	%
Inattentive	66	17.0	109	28.1
Hyperactive-impulsive	32	8.2	71	18.3
ADHD combined	17	4.4	38	9.8

$\chi^2 = 6.7$, df =1, p = 0.01

Differences in ADHD rated by parents, teachers, and other sociodemographic variables

To differentiate differences in the means of ADHD, an independent t-test was used; gender of the children was the dependent variable and ADHD rated by parents and teachers as independent variables. There were statistically significant differences between boys and girls for inattention, boys had higher rates of inattention compared with girls (t=2.52, p=0.012), boys were more hyperactive-impulsive than girls (t=2.98, p=0.003) and boys had higher combined ADHD rates than girls when rated by parents (t=3.53, p=0.001). When rated by teachers, there were also statistically significant differences between boys and girls for inattention, boys were more inattentive than girls (t=2.71, p=0.007), boys were more hyperactive-impulsive than girls (t=3.98, p=0.001), and boys had were more combined ADHD than girls (t=3.24, p=0.001).

Table 3: Independent t-test comparing ADHD and gender

Dependent variables	**Gender**	**Mean**	**SD**	**t-test**	**P**
Inattention by parents	Boys	3.67	3.25	3.06	0.002
	Girls	2.73	2.79		
Hyperactivity-Impulsivity by parents	Boys	2.71	2.17	3.53	0.001
	Girls	1.95	2.02		
Combined ADHD by parents	Boys	5.59	4.32	3.38	0.001
	Girls	4.19	3.83		
Inattention by teacher	Boys	4.75	3.62	2.71	0.007
	Girls	3.74	3.67		
Hyperactivity-Impulsivity by teacher	Boys	3.23	2.82	3.98	0.001
	Girls	2.14	2.55		
Combined ADHD by teacher	Boys	6.96	5.14	3.24	0.001
	Girls	5.29	5.04		

There were statistically significant differences in total ADHD depending upon schools; children enrolled in governmental schools had more combined ADHD than those enrolled in UNRWA schools when rated by teachers (t=2.07, p=0.113) and not by parents. Children enrolled in governmental schools were rated higher for hyperactive-impulsive than children enrolled in UNRWA schools when rated by parents (t=2.08, p=0.038) and by teachers (t=2.09, p=0.036). Children enrolled in governmental schools were more hyperactive-impulsive than in UNRWA schools when rated by teachers (t=2.07, p=0.039) and not by parents.

One way ANOVA was used to estimate the differences between children's ADHD and age. There was significant statistical difference in combined ADHD by patents according to the age of children. Post hoc test using Bonferroni statistical test indicated that children aged 13 years were significantly reported to have combined ADHD than at age of 14 and 15 years (F=5.17, p=0.006).

One way ANOVA was used to estimate the differences between children's ADHD and family income. There were significant statistical differences in combined ADHD disorders as rated by teachers (F=4.25, p=0.006), according to the family income. Bonferroni statistical test showed that children who had family income less than $150 US had significantly more combined ADHD than children with family income more than $351 US or more.

Prevalence of conduct disorder

Using DSM-IV criteria for diagnosing conduct disorder, 61 children rated by parents (15.7%) had conduct disorder and 68 rated by students themselves had conduct disorder (17.5%).

Differences in conduct disorder rated by parents and children themselves with other sociodemographic variables

There were statistically significant differences toward boys in conduct disorder both rated by parents (t=4.11, p=0.001) and rated by children themselves (t=4.40, p=0.001).

One way ANOVA was used to estimate the differences between children's conduct disorder and age (13, 14, 15 years). Post hoc test showed no significant statistical differences in reporting conduct disorder rated by parents and students according to age of children and family monthly income.

Relationships between ADHD and CD among the study sample

Pearson correlation test was conducted. There were positive significant relationships between total scores of conduct disorder rated by parents and inattention by parents (r = 0.43, p = 0.001), hyperactivity impulsivity (r = 0.45, p = 0.001), and combined ADHD by parents (r = 0.45, p = 0.001).

Table 4: Correlations between ADHD and CD among the study sample by parents

	Conduct disorder by parents
Inattention by parents	0.43 **
Hyperactivity-Impulsivity by parents	0.45 **
Combined ADHD by parents	0.47 **

*p<0.05, **p<0.01

Co-morbidity of ADHD cases and conduct disorder among the study sample

The study showed that 6.7% of children rated by parents were inattentive and had symptoms of conduct disorder, 5.2% of children had both conduct and hyperactivity impulsivity disorder, and 3.4% had both combined ADHD and conduct disorder.

Discussion

The aim of the present study was to explore the prevalence of ADHD and conduct disorder symptoms in a school-base sample of Palestinian children. Findings showed that 4.4% of children were rated by parents as having combined ADHD while 9.8% were rated by teachers. The fact that teachers significantly rated children in all ADHD scales more than parents may be explained by the difference in observer context for teachers versus parents. In the present sample, all children attended schools with more demanding environment than homes, including more rules and structure in classes. In structured activities, attention problems, hyperactivity, and conduct problems may be concealed or more easily interpreted as merely abnormal

variations of school aged children inattentiveness, activity levels, or impulsive aggressiveness. Our results were consistent with study of schoolboys and girls in Oman[7,8]. Similarly, a study of school-aged Palestinian children in the Gaza Strip measuring mental health outcomes found the prevalence rate of ADHD symptoms was 10% for children ages 6 to 11 years (11.9% boys, 8.5% girls), and 11.8% among adolescents (16.7% boys and 7.3% girls)[16]. The overall prevalence rate in the West Bank and Gaza showed 8.4% of children from Gaza fulfilled the full criteria for ADHD combined type compared to 2.7% from the West Bank, according to parents. According to teacher reports, 5.2% from the Gaza children fulfilled the criteria of ADHD compared with 3.3% from the West Bank[10]. Results were consistent with other findings that demonstrated ADHD prevalence rates of 9.4%[6]. Findings from the present study were consistent with a review of all ADHD epidemiological studies conducted in the Arab world that yielded rates ranging from 5.1% to 14.9% in school settings[11]. In the United Kingdom, a study of 964 10 year olds attending mainstream schools found ADHD rates of 8%[17].

The present study found statistically significant differences between boys and girls in total ADHD; boys had more ADHD symptoms than girls. This was consistent with findings which showed that ADHD symptoms were higher in boys (14.1%) than girls (4.4%)[6]. In Canadian study, ADHD prevalence rates were 10.1% in boys and 3.3% in girls aged 4–11 years[18]. Other findings suggest ADHD prevalence ranging from 2.2% to 17.8%, with boys having higher rates than girls and younger children having higher rates than older children and adolescents[19]. Results in all Arab studies reporting on gender differences showed ADHD prevalence to be higher in boys than girls with ratios varying from 2:1 to 3:1[11]. ADHD was significantly more prevalent in boys (4.5%) than girls (1.8%) in a study of 1,000 children aged between 6 and 10 years attending schools in Lebanon[13].

Our study showed that children enrolled in governmental schools presented with more ADHD symptoms than in UNRWA schools as rated by teachers while parents reported no differences. This may be due to UNRWA schools reporting more strategies to manage such behavior and having clear instructions for teachers on how to handle behavioral problems when compared with governmental schools. There was significant statistical difference in ADHD rated by parents according to age, where 13 year olds had significantly higher ADHD levels than 15 year olds. This was consistent with findings that suggest hyperactivity-impulsivity symptoms decline as children become older[20]. Child developmental stages may explain this; for example, older children tend to be better able to stabilize their behavior within family environments than younger age children.

There were significant statistical differences in total ADHD disorders rated by teachers according to the family income. Children from families reporting income less than $150 US had significantly higher ADHD levels than those with family incomes of $351 US or above.

Studies have shown that parents with low socioeconomic status (SES) may emphasize the need to teach their children survival skills rather than focus on encouraging quiet behaviors. Such an emphasis typically conflicts with those of most school systems; this difference in priorities may be why children of lower SES are labeled or referred first and more often[21]. Additionally, lower SES may be associated with other ADHD risk factors, such as poor prenatal care, severe marital discord, large family size, or foster care placement. Low status also may expose children to environmental or psychosocial stressors, thus, posing a risk factor for presentation of ADHD associated behaviors[22]. A study in Egypt revealed significant correlation between low SES and ADHD ($p < .05$) whereby 18.9% of children with ADHD were from low income families and very low

socioeconomic classes compared with 5.7% from families with high socioeconomic class[5].

Prevalence of conduct disorder

Using DSM-IV criteria for diagnosing conduct disorder, 15.7% of children were rated by parents as having conduct disorder compared with 17.5% of children who self-reported. There were statistically significant differences for boys rated as having conduct disorder by parents when compared with self-ratings. The current findings identified higher rates than other studies; for example, a study of 240 students identified conduct disorder in 4.58%; prevalence among boys being 6.81% and girls being 1.85%; the ratio of boys to girls being 4.5:1. Childhood onset was found in 73% and adolescent onset in 27%[23]. Such high levels of conduct disorder in Palestinian adolescents could be due to other risk factors, such as the current high rate of unemployment among parents due to continuous conflict and war in the area and siege of the Gaza Strip; living in overcrowded areas with high population density, which increase family stressors; repeated traumatic experiences; and, lack of intervention programs in early childhood to address behavioral problems. The current findings were consistent with a study on the prevalence of mental health problems among children and adolescents in Germany. A representative sub-sample of 2,863 families with children aged 7–17 from the National Health Interview and Examination Survey among Children and Adolescents showed that 15.5% were diagnosed as having conduct disorder[24]. In the current study, findings were inconsistent and higher that of the 2004 Pelotas Birth Cohort study, which assessed 4,231 live births in Pelotas, Brazil. From that number, a total of 3,585 (84.7 %) were assessed at age 6 years and found to have a higher prevalence of ADHD and hyperkinetic disorders, according to DSM-IV (2.6 %) compared to ICD-10 (2.2 %), with predominance of ADHD combined type (DSM-IV) and hyperkinetic disorder type (ICD-10). Oppositional defiant disorder (2 %) was more prevalent than conduct disorder (0.6 %) according to both DSM-IV and ICD-10 criteria. There were statistically significant differences between boys and girls in CD; boys had more CD than girls, according to parent ratings and child self-reports[25]. Boys are more likely than girls to be diagnosed with CD; a common conception is that the prevalence of CD is approximately 6 -16% of adolescent boys and 2 - 9% of adolescent girls[18]. The current study found no significant statistical differences in reporting conduct disorder rated by parents and students according to age of children and family monthly income.

Comorbidity of ADHD and conduct disorder

The current study showed that 6.7% of children rated by parents were inattentive and presented with conduct problems; 5.2% of children had both conduct and hyperactivity impulsivity disorder, and 3.4% had both combined ADHD and conduct disorder. Findings were consistent with a study in France of 1,012 children, ages 6 -12 years[26]. The prevalence of conduct disorder was 7.1%, and the prevalence of oppositional defiant disorder was 3.1%. Children with ADHD had a significantly higher prevalence of conduct disorder compared to children without ADHD (18.2% vs.6.7%). The same was true for oppositional defiant disorder (29.9% vs. 2.0%)[26].

Clinical implication and recommendations

The current study applied an epidemiologic approach to the evaluation of the prevalence of coexisting ADHD and conduct disorder, which may be suitable for other pathologic conditions as well. Findings confirmed a strong relationship between ADHD and conduct disorder and provided specific data on the prevalence. The possibility that ADHD and conduct disorder may share an underlying genetic, biochemical, or even organic factor is intriguing and warrants further in-depth study.

Results were also congruent with other studies in the region and in Western countries, which highlights the need to establish psychosocial rehabilitation programs with high adequacy that allows children to become more

integrated in society through counseling programs inside specialized institutions. It would also be important to provide significant focus on the role of family "fathers and mothers" in psychological intervention through awareness raising activities such as lectures, meeting and symposiums. Also, psychosocial counseling programs must reach low income families in a way that addresses the possibility of ADHD symptoms among their children. A further benefit would be for teachers to learn behavior modification for better classroom management that reflects the needs of children with ADHD. Difficulty completing tasks, following directions and rules, staying seated, raising their hand and waiting to be called on, getting along with peers and adults, and transitioning to the next activity by cleaning up and getting out required materials are skills that need to be taught and reinforced for children with ADHD.

Study limitations

In light of several study limitations, the current findings should be interpreted with caution. The study population was restricted to south of the Gaza Strip and private schools were not included. Furthermore, data are not generalizable to the larger population of children in the Gaza Strip because the current study was restricted to students in schools rather than community. In addition, high school students were not included, which limits any conclusions about the relationship between the role of age on ADHD and conduct disorder.

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الملخص

هدفت هذه الدراسة إلى معرفة مدى شيوع اضطراب تشتت الانتباه و فرط الحركة، واضطراب المسلك لدى الأطفال الفلسطينيين في جنوب قطاع غزة. لتحقيق هذا الهدف تم إختيار عينة طبقية عشوائية تم اختيارها من الصفوف الثلاث السابع والثامن والتاسع من ثمان مدارس إعدادية موزعة بالتساوي بين مدارس الوكالة والحكومة في محافظتي خان يونس ورفح. و بلغت عينة الدراسة 388 طفلاً من الجنسين منهم 194 من الأولاد بنَسبة 50%، و 194 من البنات بنسبة 50 % .

و قد أُستخدمت مقاييس قائمة العوامل الديمغرافية والاقتصادية-الاجتماعية، و المقابلة الإكلينيكية لاضطراب تشتت الانتباه و فرط الحركة – نموذج الوالدين و المعلمين حسب معايير الدليل التشخيصي والإحصائي الرابع ، ومقياس اضطرابات المسلك نموذج الوالدين و الطفل حسب نفس المعيار. **النتائج:** توصلت الدراسة إلى أن نسبة انتشار اضطراب تشتت الانتباه و فرط الحركة المشترك هو 4.4 % بتقدير الآباء و9.8 % بتقدير المعلمين . وكشفت النتائج عن وجود فروق بين الجنسين في اضطرابات نقص الانتباه والحركة الزائدة وكانت الفروق لصالح الذكور بتقدير الآباء والمعلمين. وكانت الفروق دالة إحصائياً في نقص الانتباه والحركة الزائدة لصالح الطلبة الذين يدرسون في المدارس الحكومية بتقدير المعلمين. وكشفت النتائج عن وجود فروق دالة إحصائياً في اضطرابات نقص الانتباه والحركة الزائدة لدى أطفال العينة بتقديرات المعلمين تبعاً لمتغيرات: الدخل الشهري للأسرة لصالح من تقل دخول أسرهم عن 150 أمريكي شهرياً . في

حين تبين أن 15.7 % من الأطفال بتقدير الآباء و17.5 % بتقدير الأطفال أنفسهم، بأنهم حالات اضطراب المسلك.و وجودت الدراسة فروق بين الجنسين في إضطرابات المسلك بتقديرات الآباء والاطفال وكانت الفروق لصالح الذكور من الأطفال. أما بالنسبة لترافق المراضة فقد بينت النتائج حسب تقديرات الآباء أن 6.7% من أفراد العينة ممن لديهم اضطراب نقص الانتباه و5.2% ممن لديهم الحركة الزائدة والاندفاعية، و3.4% من مضطربي نقص الانتباه والحركة الزائدة لديهم ترافق مراضة مع اضطرابات المسلك. كما كشفت النتائج عن وجود علاقة موجبة دالة إحصائياً بين الدرجة الكلية لإضطرابات نقص الانتباه والحركة الزائدة وبين اضطرابات المسلك بتقدير الآباء. كما وجدت علاقة موجبة دالة إحصائياً بين الدرجة الكلية لاضطرابات المسلك وبين الدرجة الكلية لنقص الانتباه بتقديرات الآباء. **الخلاصة:** النتائج التي توصلت إليها الدراسة بينت وجود علاقة قوية بين إضطراب نقص الانتباه والحركة الزائدة واضطراب المسلك، و هذه الدراسة وفرت بيانات محددة عن مدى انتشار مثل هذه الاضطرابات في المجتمع الفلسطيني. أظهرت نتائج الدراسة أن معدل انتشار اضطراب نقص الانتباه وفرط النشاط واضطرابات المسلك عند الأطفال الفلسطينيين متطابقة مع دراسات أخرى في المنطقة وفي الدول الغربية مما يسلط الضوء على الحاجة لوضع برامج إعادة التأهيل النفسي التي تسمح للأطفال بأن يصبحوا أكثر تكاملاً في مجتمعهم من خلال برامج الإرشاد داخل المدارس والمؤسسات المتخصصة. وإعطاء تركيز كبير على دور الأسرة والمدرسة في مساعدة أطفالهم .

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