Med. J. Cairo Univ., Vol. 86, No. 3, June: 1719-1725, 2018
www.medicaljournalofcairouniversity.net

Prevalence of ADHD Symptoms among a Sample of Egyptian School Age Children

REDA EL-SAYED, M.Sc.*; MAHMOUD EL-MOGY, M.D.*; HASSAN ALI, M.D.* and MOHAMED M.A. GHOWINAM, M.D.**

The Departments of Pediatrics and Psychiatry Medicine**, Faculty of Medicine, Al-Azhar University, Cairo, Egypt*

Abstract

Background: Attention Deficit Hyperactivity Disorder (ADHD) is highly prevalent in school age children worldwide.

Objective: This study was undertaken to assess the prevalence and association of ADHD with child demographics among a sample of Egyptian school age children.

Patients and Methods: 111 children admitted to the outpatient pediatric clinic in Al-Azhar University hospitals were evaluated using Psychiatric interview-IQ and Conner's Abbreviated Rating Scale that consists of several behavioral parameters for the diagnosis of ADHD.

Results: The most prevalent disorder in this study was learning disorder (23.1%) followed by ADHD (20.9%) and impulsive-hyperactive disorder (14.1%). The ADHD showed a positive correlation with conduct disorder, learning problem, psychosomatic disorder, impulsive-hyperactive disorder, and anxiety disorder. Male gender and consanguinity were significantly correlated with higher incidence of ADHD.

Conclusion: The most prevalent disorder in this study was learning disorder (23.1 %) followed by ADHD (20.9%). ADHD was significantly correlated with other types of emotional and behavioral disorders. Also, male gender and consanguinity were a significant predictors for ADHD.

Key Words: *Prevalence – ADHD – Male gender – Behavioral disorders – Emotional disorders.*

Introduction

ATTENTION-DEFICIT hyperactivity disorder (ADHD) is a neurobehavioral disorder that typically begins in childhood and often persists into adulthood. ADHD is characterized by developmentally inappropriate levels of attention and hyperactivity resulting in functional impairment in academic, family, and social settings **[1,2]**.

ADHD is a clinically heterogeneous condition, in which symptoms overlap or occur with other conditions. ADHD is most often identified when children first start school **[3]**. However, its symptoms may persist and continue to cause impairment throughout adolescence and adulthood **[4]**.

ADHD may also be identified in children of preschool age **[5]**. The worldwide prevalence of ADHD ranges from 5.29% to 7.1% (5.4-8.7% in Africa, 6.24% in Jordan, 16.4% in Saudi Arabia) **[4,6]**. The etiology of ADHD is not clearly understood; there is a growing body of evidence for the involvement of genetic, neurobiological and environmental factors **[7-10]**. A range of environmental factors have been implicated in the etiology of ADHD including risk factors during pregnancy or early childhood, social risk factors, and gene-environment interactions **[11,12]**.

The aim of this study was to assess the prevalence of behavioral and emotional symptoms among a sample of Egyptian school age children.

Patients and Methods

After ethical approval from Ethical Committee of Al-Azhar University Hospitals and written approval from the families of children who were allocated in the study. The study population in this prospective study were 277 children admitted to the Outpatient Pediatric Clinic in Al-Azhar University Hospitals (SAYED GALAL hospital from March 2016 to September 2016). The inclusion criteria were both sex school age children (6-12) with one of parent's alive. Children suffering from severe acute disease as pneumonia, chronic diseases as cardiac or hepatic, history of convulsion or CNS affection, established hereditary syndromes as Down as well as established epileptic child were excluded from the study.

Correspondence to: Dr. Reda El-Sayed,
E-Mail: redamohamed24@yahoo.com.

Tools:

- Clinical history taking and clinical examination of chest-cardiac-neuro.
- Conner's Abbreviated Rating Scale (CARS): This is a rating scale that consists of several behavioral parameters for the diagnosis of ADHD. This was rated by the parents and the teachers.
- Psychiatric interview-IQ.

Statistical analysis of data was done using IBM© SPSS© Statistics version 22 (IBM© Corp., Armonk, NY, USA). Numerical data were expressed as mean and standard deviation. Qualitative data were expressed as frequency and percentage. Chi-square test (Fisher's exact test) was used to examine the relation between qualitative variables. For quantitative data, comparison between two groups was done using independent sample *t*-test. All tests were two-tailed. A *p*-value <0.05 was considered significant.

Results

The mean age of included subjects was 8,6, the mean age of the fathers of included children was 41.3 years old, and the mother's age was 36.5 years old (Table 1). Most of the children were male (57%) and 43% were females. About 90.6% of children had no consanguinity having mental disorders and only 9.4% had relatives having mental disorders. The most of children (96%) use their right hand and only 4% use their left hand. The majority of children (43%) were the first children, 40.8% were the 2nd in order and 16.2% of them were the last (Table 2).

The most prevalent disorder in this study was learning disorder (23.1%) followed by ADHD (20.9% and impulsive-hyperactive disorder (14.1%). The least incidence disorders were conduct disorder (7.9%), anxiety disorder (6.9%) and psychosomatic disorder (5.4%) (Table 3).

The ADHD showed a positive correlation with conduct disorder, learning problem, psychosomatic disorder, impulsive-hyperactive disorder, and anxiety disorder (Table 4).

Male gender was significantly correlated with ADHD (*p*-value=0.039). Consanguinity showed a highly significant correlation with the higher incidence of ADHD. However, the type of used hand and order of child in family showed no significant correlation with ADHD. Also, the age of mother, father and child showed no significant correlation with ADHD (Table 5). But, ADHD symptoms were higher during the age from 6-8 years old than the age from 9-12 years old (Table 6 & Fig. 1).

Table (1): Age of included subjects and family.

	Mean	SD	Median	Minimum	Maximum
Age:					
Child age	8.6	2.0	8.0	6.0	12.0
Father age	41.3	6.1	40.0	29.0	62.0
Mother age	36.5	5.4	37.0	22.0	51.0

Table (2): Demographics of the included children.

	Frequency	Percent
Gender:		
Male	158	57.0
Female	119	43.0
Total	277	100.0
Consanguinity:		
–ve	251	90.6
+ve	26	9.4
Total	277	100.0
Type of used hand:		
Right	266	96.0
Left	11	4.0
Total	277	100.0
Order of child in family:		
First	119	43.0
Middle	113	40.8
Last	45	16.2
Total	277	100.0

Table (3): Prevalence of behavior problems in included subjects.

	Yes		No	
	Count	Row N %	Count	Row N %
Conducted disorder	2	7.9	255	92.1
Learning problem	46	23.1	213	76.0
Psychosomatic disorder	15	5.4	262	94.6
Impulsive-hyperactive disorder	39	14.1	238	85.9
Anxiety disorder	19	6.9	258	93.1
ADHD	58	20.9	219	79.1

Table (4): Correlations between ADHD and other diagnosed disorder.

Crosstab			ADHD		Total	Fisher's exact test
			Yes	No		
Conducted disorder	Yes	Count	18	4	22	Value=59.057
		% within ADHD	31.0%	1.8%	7.9%	*p*-value=0.000
	No	Count	40	215	255	
		% within ADHD	69.0%	98.2%	92.1%	
Learning problem	Yes	Count	43	21	64	Value=123.675
		% within ADHD	74.1%	9.6%	23.1%	*p*-value=0.000
	No	Count	15	198	213	
		% within ADHD	25.9%	90.4%	76.9%	
Pshychosomatic disorder	Yes	Count	10	5	15	Value=22.734
		% within ADHD	17.2%	2.3%	5.4%	*p*-value=0.000
	No	Count	48	214	262	
		% within ADHD	82.8%	97.7%	94.6%	
Impulsive-hyperactive disorder	Yes	Count	29	10	39	Value=91.628
		% within ADHD	50.0%	4.6%	14.1%	*p*-value=0.000
	No	Count	29	209	238	
		% within ADHD	50.0%	95.4%	85.9%	
Anxiety disorder	Yes	Count	7	12	19	Value=8.526
		% within ADHD	12.1%	5.5%	6.9	*p*-value=0.048
	No	Count	51	207	258	
		% within ADHD	87.9%	94.5%	93.1%	

Table (5): Correlations between ADHD and child demographics.

			ADHD		Total	Pearson Chi-Square
			Yes	No		
Gender	Male	Count	40	118	158	Value=4.258
		% within Sex	25.3%	74.7%	100.0%	*p*-value=0.039
	Female	Count	18	101	119	
		% within Sex	15.1%	84.9%	100.0%	
Cons.	-ve	Count	44	207	251	Value=18.770
		% within Cons.	17.5%	82.5%	100.0%	*p*-value=0.000
	+ve	Count	14	12	26	
		% within Cons.	53.8%	46.2%	100.0%	
Hand	Right	Count	54	212	266	Value=1.646
		% within Hand	20.3%	79.7%	100.0%	*p*-value=0.250
	Left	Count	4	7	11	
		% within Hand	36.4%	63.6%	100.0%	
Order	First	Count	28		119	Value=3.087
		% within Order	23.5%	76.5%	100.0%	*p*-value=0.214
	Middle	Count	18	95	113	
		% within Order	19.5%	84.1%	100.0%	
	Last	Count	12	33	45	
		% within Order	26.7%	73.3%	100.0%	

		Mean	Std. deviation	Mean	Std. deviation	Independent samples test
Age	Age	8.4	2.0	8.6	2.0	*p*-value=0.348
	Father age	40.2	6.4	41.5	6.1	*p*-value=0.142
	Mother age	35.7	5.9	36.7	5.2	*p*-value=0.214

Table (6): Prevalence of ADHD symptoms in different age.

			ADHD symptoms			
			Yes	No	Border line	Total
Age	6-8y	Count	41	127	12	180
		Row N %	22.8%	70.6%	6.7%	100.0%
	9-12y	Count	17	78	2	97
		Row N %	17.5%	80.4%	2.1%	100.0%

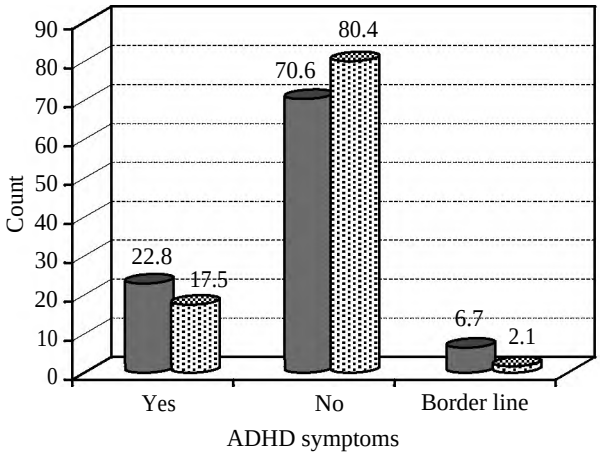

Fig. (1): Prevalence of ADHD symptoms in different age.

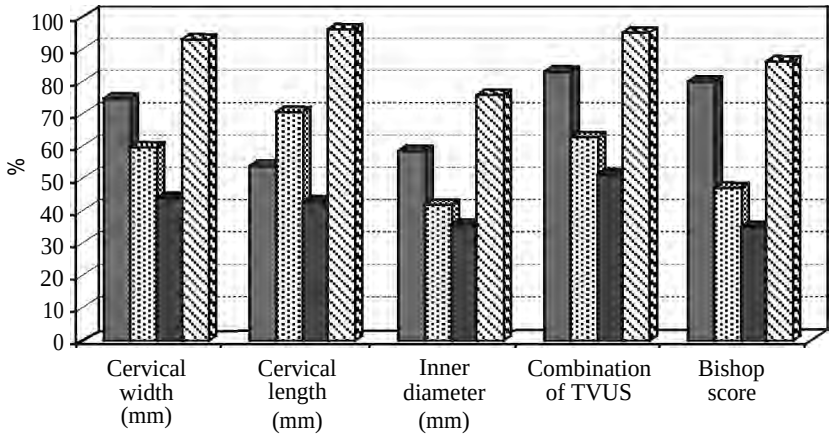

Fig. (2): Accuracy of TVS and Bishop Score in prediction of labor induction success.

Discussion

Attention Deficit Hyperactivity Disorder (ADHD) is highly prevalent in children worldwide and its prevalence in adults is increasingly recognized **[13]**. In the present study, the most prevalent disorder was learning disorder (23.1%) followed by ADHD (20.9% and impulsive-hyperactive disorder (14.1%). The least incidence disorders were conduct disorder (7.9%), anxiety disorder (6.9%) and psychosomatic disorder (5.4%).

In consistence, ADHD prevalence in Fayoum City was 20.5%, however, was the highest in comparison with the DSM-5 both internationally and in the Arab countries **[14]**. However, The DSM-5 showed that the prevalence of ADHD was approximately 5% in most cultures **[15,16]**.

Contrast studies showed that the prevalence of ADHD based on the DSM-IV criteria was found to be 6.9% among primary school children of Menoufia governorate, Egypt **[1]** which is higher than the results of another study (5.1%) done in the same governorate in 2007 **[17]**. Also, another study done in Assuit city, Egypt showed that the prevalence of ADHD was 6% **[18]**. In addition, the results in Suez Canal University Hospital by Magda et al., which found the prevalence to be 13.6% **[19]**.

As for learning difficulties and in the same respect with our results, the rate of incidence of difficulties related to learning lie between 12 per cent and 30 per cent of the school population **[20,21]**.

The prevalence of hyperactive disorder in the present study was higher than another study con-

ducted in Primary School Students in Jeddah city, KSA and the prevalence of impulsive hyperactive disorder was 2.2% **[22]**. In consistence, a study conducted among Male Primary School Children in Dammam, Saudi Arabia **[23]** showed that the prevalence of hyperactivity-impulsivity was 12.4 which is close to our results.

The results for conduct disorder in this study were lower than other studies as in several studies reported the prevalence of conduct disorder in different Middle Eastern countries; for instance, Mohammadi et al., revealed a prevalence rate of 32.9% for conduct disorder in Iranian children and adolescents **[24]**. Another research which was conducted on 6-12-year-old children in Egypt reported the prevalence of conduct disorder to be 25.3% [25].

The median prevalence rate of all anxiety disorders in a recent review was 8% with an extremely wide range of estimates (e.g., 2% to 24%) which is approximately like these present results (6.9%) [26].Also, the positive cases in an Egyptian Sample of School Students at the Age of 12-18 Years according to both GHQ and Anxiety scale represented 25.5% of total investigated cases completing the study **[27]**.

This study showed that ADHD showed a positive correlation with conduct disorder, learning problem, psychosomatic disorder, impulsive-hyperactive disorder, and anxiety disorder. In accordance with our results, conduct disorder was significantly associated with ADHD in school age children **[28,29]**, Although a number of studies have examined the coexistence of learning disorders and ADHD, only a few have studied the prevalence of ADHD in a cohort of school-aged children diagnosed with learning problems **[30,31]**. In addition, ADHD patients show elevated levels of impulsivity as measured by a variety of tasks **[32]**. Moreover, the anxiety disorders have been found to occur more commonly in the ADHD population **[33,34]**.

Male gender was significantly correlated with ADHD (p-value=0.039). Consanguinity showed a highly significant correlation with the higher incidence of ADHD. However, the type of used hand and order of child in family showed no significant correlation with ADHD. Also, the age of mother, father and child showed no significant correlation with ADHD.

In accordance, some studies revealed that males had a higher prevalence of ADHD than females and had about three folds increased chance of having ADHD (1). This was in concordance with several studies that showed a well-documented gender difference in the prevalence of ADHD **[1,14,22,35]**.

Regarding to the order of child in the family, in contrast results revealed that the larger the family size, the higher the prevalence of ADHD **[1]**. Large family size is contributing factor to ADHD due to impact on interpersonal relationships between family members **[36,37]**.

As for Consanguinity and in accordance with our study, a current study demonstrated that consanguinity had about one and half folds increased chance to lead to ADHD (adjusted OR=1.4) **[1]** which was in concordance with Jordanian study which found that the prevalence of ADHD was 34.8% among consanguineous families and the inattentive subtype was more common than others **[37]**. Another study in Qatar showed a significant relationship between ADHD symptoms and consanguineous parents **[38]**.

In agreement with our results, a recent study in Fayoum City (Egypt) Among School-Age Children showed that there was non-significant correlation between age and ADHD prevalence **[14]**.

Conclusion and Recommendations:

The presently prospective study showed that the most prevalent disorder was learning disorder (23.1%) followed by ADHD (20.9%). ADHD was significantly correlated with other types of emotional and behavioral disorders. Also, male gender and consanguinity were a significant predictors for ADHD. Further evaluation of the accurate prevalence and correlations of ADHD with child demographics and efficiency should be studied in large population studies.

Ethics: This study was approved from the Ethical Committee of Al-Hussein University Hospital, and a written informed consent was obtained from subjects included in the study.

Funding: We ensure and stated that our study is self-funded by authors without any governmental or institutional support.

Disclosures: We declare that we have no conflicts of interest.

References

1- FARAHAT T., ALKOT M., RAJAB A. and ANBAR R.: Attention-Deficit Hyperactive Disorder among Primary School Children in Menoufia Governorate, Egypt. International Journal of Family Medicine, 2014: 257369, 2014.

2- POLANCZYK G.V., SALUM G.A., SUGAYA L.S., CAYE A. and ROHDE L.A.: Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. Journal of child psychology and psychiatry, and Allied Disciplines, 56 (3): 345-65, 2015.

3- MARTIN A.B., LASSMAN D., WASHINGTON B., CATLIN A. and TEAM N.H.E.A.: Growth in US health spending remained slow in 2010; health share of gross domestic product was unchanged from 2009. Health Affairs. 3I (1): 208-19, 2012.

4- WILLCUTT E.G.: The prevalence of DSM-IV attention-deficit/hyperactivity disorder: A meta-analytic review. Neurotherapeutics: The journal of the American Society for Experimental. Neuro. Therapeutics., 9 (3): 490-9, 2012.

5- SCHLACK R., HOLLING H., KURTH B.M. and HUSS M.: [The prevalence of attention-deficit/hype ractivity disorder (ADHD) among children and adolescents in Germany. Initial results from the German Health Interview and Examination Survey for Children and Adolescents (KiGGS)]. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz, 50 (5-6): 827-35, 2007.

6- POLANCZYK G., de LIMA M.S., HORTA B.L., BIEDERMAN J. and ROHDE L.A.: The worldwide prevalence of ADHD: A systematic review and metaregression analysis. Am. J. Psychiatry, 164 (6): 942~8, 2007.

7- NEALE B.M., MEDLAND S., RIPKE S., ANNEY R.J., ASHCRSON P., BUITELAAR J., et al.: Case-control genome-wide association study of attention-deficit/hyperactivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 49 (9): 906-20, 2010.

8- SANCHEZ-MORA C., RAMOS-QUIROGA J.A., BOSCH R., CORRALES M., GARCIA-MARTINEZ I., NOGUEIRA M., et al.: Case-control genome-wide association study of persistent attention-deficit hyperactivity disorder identifies FBX033 as a novel susceptibility gene for the disorder. Neuropsychopharmacology: Official publication of the American College of Neuropsychopharmacology, 40 (4): 915-26, 2015.

9- SAGIV S.K., EPSTEIN J.N., BELLINGER D.C. and KORRICK S.A.: Pre- and postnatal risk factors for ADHD inanonclinical pediatric population. Journal of Attention Disorders, 17 (l): 47-57, 2013.

10- SHAW P., MALEK M., WATSON B., SHARP W., EVANS A. and GREENSTEIN D.: Development of cortical surface area and gyrification in attention-deficit/hyperactivity disorder. Biological Psychiatry, 72 (3): 191-7, 2012.

11- RETZ W., FREITAG C.M., RETZ-JUNGINGER P., WENZLER D., SCHNEIDER M., KISSLING C., et al.: A functional serotonin transporter promoter gene polymorphism increases ADHD symptoms in delinquents: Interaction with adverse childhood environment. Psychiatry. Res., 158 (2): 123-31, 2008.

12- SANTOS L.M., QUEIROS F.C., BARRETO M.L. and SANTOS D.N.: Prevalence of behavior problems and associated factors in preschool children from the city of Salvador, state of Bahia, Brazil. Revista brasileira de psiquiatria (Sao Paulo, Brazil : 1999), 38 (l): 46-52, 2016.

13- FARAONE S.V., SERGEANT J., GILLBERG C. and BIEDCRMAN J.: The worldwide prevalence of ADHD: is it an American condition? World Psychiatry, 2 (2): 104-13, 2003.

14- ABOUL-ATA M.A. and AMIN F.A.: The Prevalence of ADHD in Fayoum City (Egypt) Among School-Age Children: Depending on a DSM-5-Based Rating Scale. Journal of Attention Disorders, 2015.

15- APA. American Psychiatric Association: Diagnostic criteria and codes. In M. B. First & M. N. Ward (Eds.), Diagnostic and statistical manual of mental disorders (5th ed., pp. 59-65). Washington, DC, 2013.

16- GOMEZ R. and HAFETZ N.: DSM-IV ADHD: Prevalence based on parent and teacher ratings of Malaysian primary school children. Asian Journal of Psychiatry, 4 (l): 41-4, 2011.

17- BISHRY Z., ELWAN M., RASHED N., Al HAMRAWY L., EL-SAYED S. and EL-BAHY M.: Prevalence of attention deficit hyperactivity disorders in primary school children in Shebin El Kom. Curr. Psychiatry, 15: 54-61, 2008.

18- EL-TALLAWY H.N., HASSAN W.A., EL-BEHARY A. and SHEHATA G.A.: Prevalence of attention deficit hyperactivity disorder among elementary schools children in Assiut City-Egypt. Egyptian Journal of Neurology, Psychiatry and Neurosurgery, 42 (2): 517-26, 2005.

19- MAGDA K., EI-DEFRAWI M., ISMAEL M. and AMAL Z.: Pychiatric morbidity among children 6-12 years attending pediatric outpatient clinic in Suez Canal University Hospital. Current Psychiatry, 7 (3): 276-90, 2000.

20- WESTWOOD P.: Learning and learning difficulties: Approaches to teaching and assessment: Routledge, 2013.

21- KAVALE K.A.: Discrepancy Models in the Identification of Learning Disability. Executive Summary, 2001.

22- HOMIDI M., OBAIDAT Y. and HAMAIDI D.: Prevalence of attention deficit and hyperactivity disorder among primary school students in Jeddah city, KSA. Life Science Journal, 3: 10, 2013.

23- AL HAMED J.H., TAHA A.Z., SABRA A.A. and BELLA H.: Attention Deficit Hyperactivity Disorder (ADHD) among Male Primary School Children in Dammam, Saudi Arabia: Prevalence and Associated Factors. J. Egypt Public Health Assoc., 83 (3-4): 165-82, 2008.

24- MOHAMMADI M.R., SALMANIAN M., GHANIZADEH A., ALAVI A., MALEK A., FATHZADEH H., et al.: Psychological problems of Iranian children and adolescents: Parent report form of Strengths and Difficulties Questionnaire. Journal of mental health (Abingdon, England), 23 (6): 287-91, 2014.

25- ELHAMID A.A., HOWE A. and READING R.: Prevalence of emotional and behavioural problems among 6-12 year old children in Egypt. Social psychiatry and psychiatric epidemiology, 44 (1): 8-14, 2009.

26- COSTELLO E.J., EGGER H. and ANGOLD A.: 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. Journal of the American Academy of Child and Adolescent Psychiatry. 44 (10): 972-86, 2005.

27- ISMAIL A.A.A., HEGAZI H., LOTFI M., KAMEL A. and RAMDAN M.: The Prevalence and Risk Factors of Anxiety Disorders in an Egyptian Sample of School and

Students at the Age of 12-18 Years. J. Psychiatry, 18: 316, 2015.

28- AL-MAMARI W.S., EMAM M.M., AL-FUTAISI A.M. and KAZEM A.M.: Comorbidity of Learning Disorders and Attention Deficit Hyperactivity Disorder in a Sample of Oman! Schoolchildren. Sultan Qaboos University Medical Journal, 15 (4): e528-e33, 2015.

29- PAULI-POTT U., NEIDHARD J., HEINZEL–GUTENB-RUNNER M. and BECKER K.: On the link between attention deficit/hyperactivity disorder and obesity: Do comorbid oppositional defiant and conduct disorder matter? European child & Adolescent Psychiatry, 23 (7): 531-7, 2014.

30- LAZARUS B.D., DUPAUL G. and STONER G.: ADHD in the Schools: Assessment and Intervention Strategies. JSTOR, 2004.

31- FLETCHER J.M., LYON G.R., FUCHS L.S. and BARNES M.A.: Learning disabilities: From identification to intervention: Guiiford. Press, pp. 25-27, 2006.

32- SOLANTO M.V.: Dopamine dysfunction in AD/HD: integrating clinical and basic neuroscience research. BehaviouraL Brain Research, 130 (l-2): 65-71, 2002.

33- RAO P.A. and LANDA R.J.: Association between severity of behavioral phenotype and comorbid attention deficit hyperactivity disorder symptoms in children with autism spectrum disorders, Autism: The international journal of Research and Practice, 18 (3): 272-80, 2014.

34- XIA W., SHEN L. and ZHANG J.: Comorbid anxiety and. depression in school-aged children with attention deficit hyperactivity disorder (ADHD) and selfreported symptoms of ADHD, anxiety, and depression among parents of school-aged children with and without ADHD. Shanghai J. Archives of Psychiatry, 27 (6): 356-67, 2015.

35- ZORLU A., UNLU G., CAKALOZ B., ZENCIR M., BUBER A. and ISILDAR Y.: The prevalence and comorbidity rates of ADHD among school-age children in Turkey. Journal of Attention Disorders, 10870547155-77991, 2015.

36- MORADI A., KHABAZ K.M., AGAH T., JAVAHER F.A., REZVAN B., HAERI K.Z., et al.: The prevalence of attention deficit hyperactivity disorder (ADHD) among school children of Nishaboor-Iran during 2006, 2008.

37- PHEULA G.F., ROHDE L.A. and SCHMITZ M.: Are family variables associated with ADHD, inattentive type? A case-control study in schools. European child & adolescent psychiatry, 20 (3): 137-45, 2011.

38- NAFI O.A. and SHAHEEN A.M.: Prevalence of attention deficit hyperactive disorder (ADHD) in school children in Al-Qaser district Jordan. Jordan Medical Journal, 45 (1): 128-38, 2011.

الاضطرابات النفسية لدى الأطفال هى مشكلة صحية عامة مهمة بسبب زيادة انتشارها وبدايتها المبكرة، وتأثيرها على الطفل والأسرة والمجتمع

تم تصنيف اضطراب فرط النشاط نقص الانتباه كاضطراب فى النمو، وعلى الرغم من أن بعض الخبراء يعتبرون أنه مرض اضطراب السلوك. يؤثر اضطراب نقص الانتباه مع فرط الحركة على قرابة من ٥ إلى ١٥٪ من الأطفال فى سن المدرسة.

وقد أجريت هذه الدراسة على الأطفال الذين يزورون العيادات الخارجية لطب الأطفال فى مستشفيات جامعة الأزهر لتقييم مدى انتشار الأعراض السلوكية والعاطفية لدى عينة من الأطفال المصريين فى سن المدرسة.

فى هذه الدراسة، كانت مشكلات التعلم تمثل (٢٣.١٪)، يليه اضطراب نقص الانتباه وفرط النشاط (٢٠.٩٪) واضطراب الإدمان المفرط (١٤.١٪)، وكانت أقل اضطرابات حدوث اضطرابات السلوك (٧.٩٪)، اضطرابات القلق (٦.٩٪) والاضطرابات نفسية (٥.٤٪).

أظهر اضطراب نقص الانتباه مع فرط النشاط وجود علاقة إيجابية مع اضطرابات السلوك، ومشكلة التعلم، اضطرابات نفسية، واضطرابات القلق.

أظهر اضطرابات السلوك عدم وجود علاقة كبيرة مع النوع، وزواج الأقارب، نوع اليد المستعملة، وترتيب الطفل فى الأسرة وعمر الأب أو الطفل. على العكس أظهر عمر الأم علاقة عكسية مع اضطراب السلوك.

أظهرت مشكلة التعلم أنه لا علاقة كبيرة مع اليد المستخدمة، وترتيب الطفل فى الأسرة وعمر الطفل. ومع ذلك، الذكورة، كانت مرتبطة زواج الأقارب بشكل كبير مع مشكلة التعلم. أظهر سن الأم والأب فى علاقة عكسية مع مشكلة التعلم.

أظهرت الدراسة وجود علاقة وثيقة بين اضطراب التسرع المفرط مع الأطفال الذكور، زواج الأقارب، واستخدام اليد اليسرى، لم تظهر الدراسة وجود ارتباط كبير مع أى من حالات الطفل الإجتماعية بإستثناء القرابة التى أظهرت علاقة وثيقة مباشرة مع اضطرابات القلق.

كان لزواج الأقارب والأطفال الذكور علاقة كبيرة مع اضطراب نقص الانتباه وفرط النشاط. ومع ذلك، أظهر نوع اليد المستخدمة، وترتيب الطفل فى الأسرة المستخدمة عدم وجود ارتباط كبير مع اضطراب نقص الانتباه وفرط النشاط. أيضاً، أظهر سن الأم والأب والطفل عدم وجود ارتباط كبير مع اضطراب نقص الانتباه وفرط النشاط.

فى الختام، فإن الاضطراب الأكثر شيوعاً فى هذه الدراسة هو اضطرابات التعلم (٢٣.١٪)، يليه اضطراب نقص الانتباه وفرط النشاط. (٢٠.٩٪). ارتبط اضطراب فرط النشاط نقص الانتباه بشكل كبير مع أنواع أخرى من اضطرابات عاطفية وسلوكية. أيضاً، يمكن استخدام زواج الأقارب والأطفال الذكور كدليل للتنبأ بأضطراب نقص الانتباه وفرط النشاط.