



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2013564>Available online at: <http://www.iajps.com>**Research Article****TEACHERS' KNOWLEDGE AND THEIR ROLE IN
SCREENING OF ADHD IN CHILDREN IN AL-RIYADH CITY,
SAUDI ARABIA**

Mona Hassan Alfadeel¹, Najla Mohammed Alajmi², Alaa Fahad Alosaimi²,
Afnan Sultan Alotaibi², Alaa Saad AlAli², Ghazal Mobarak Alruwili², Reham Sulaiman
Aljohani², Maram Sameer Saad aldeen², Manal Mustafa Alghazal², Noura Hamoud
Alhazmi², Sarah Naif Aldawish²

¹Assistant Professor Community Medicine in Almaarefa University, ²Almaarefa colleges

Abstract

Background: Attention-deficit hyperactivity disorder (ADHD) is one of the most prevailing neurodevelopmental disorders that affects children. Teacher's knowledge plays an important role in the process of assessing, screening, and diagnosing this disorder at its early stages.

Objectives: To evaluate teachers' knowledge toward ADHD and to detect the main source of the teacher's knowledge about ADHD. **Methods:** A cross-sectional study was conducted on 51 females Primary school teachers. They were randomly chosen from 3 different schools in Al-Riyadh, Saudi Arabia. They completed a questionnaire on their general knowledge of ADHD, and the symptoms of the condition. Factors which might affect their knowledge were also examined. **Result:** The study showed that (77%) of the teachers had bachelor degree and (59%) had 1-5 years of experience, (74.5%) of the teachers' knowledge about ADHD came from hearing about it. (75%) of teachers had a good knowledge about the symptoms of ADHD. (92.2%) of the teachers could differentiate between students with or without ADHD. (84.6%) and (76.9%) of the teachers had attended courses about ADHD and can differentiate between normal and ADHD students and deal with ADHD student respectively. (89%) of the teachers with good level of knowledge were able to differentiate between normal and ADHD students, (73%) of the teachers with good level of knowledge were capable of dealing with ADHD students, (19%) of the teachers with good level of knowledge were able to train other teachers about ADHD. (38.5%) of the teachers had attended courses with certificate and could train other teachers about ADHD and there was a statistical association between teachers training and training others about dealing with ADHD students ($p=0.017$).

Conclusion: High number of the teachers had attended courses with certificate. Those had a significantly better ability in training other teachers about ADHD than those who had courses without certificate or without courses.

Key words: ADHD, Knowledge, Saudi Arabia.

Corresponding author:
Mona Hassan Alfadeel,
Almaarefa Colleges

QR code



Please cite this article in press **Mona Hassan Alfadeel et al., Teachers' Knowledge And Their Role In Screening Of Adhd In Children In Al-Riyadh City, Saudi Arabia., Indo Am. J. P. Sci, 2018; 05(12).**

INTRODUCTION:

Attention Deficit Hyperactivity Disorder is term referred as "ADHD". It is neurobiological disorder present during childhood "preschool age" and may persist until adulthood. This chronic condition is very widely in their particular skills and difficulties affects the child's self-control, behavior, school achievement, social skills and relationship.

ADHD is one most common childhood disorder and the main characteristic is inattention, hyperactivity and impulsivity. And some have other type of co-existing mental health problem (such as oppositional defiant behavior or high level of anxiety) and/or specific learning disabilities. Without treatment they will have serious consequences including school failure, depression and problem with relationships ⁽¹⁾.

The Diagnostic and Statistical Manual for Mental Disorder DSM-IV TR is the most used medical system for diagnosis ADHD. According to DSM-IV the ADHD divided into subtype: type 1 children shows symptoms of inattention or attention defect "ADD" like difficulty focusing for long time, easily distractible and doesn't seem to listen when spoken dirtily. Type 2 shows symptoms of hyperactivity like restless, agitated, appear as they need to move, make excessive noise and often talks excessively. And type 3 children shows symptoms of both 2 types diagnostic as combined subtype ⁽²⁾.

Many research studies had done to determine the cause of ADHD, the evident that ADHD have strong genetic basis since 40%30% of people diagnosed with ADHD have relative with same disorder, the particular gene cause abnormal level of neurotransmitter and cause ADHD. Some studies believe that environmental factor have role in development the ADHD as triggering role and certain component of food like sugar have effect on behavior ,however it's not a primary causing agent of ADHD ⁽³⁾.

Medication treatment of ADHD relieves the symptoms but don't improve the skills and knowledge that the child may require to achieve. Beside medications he needs psychotherapy, social skills training, and special supervision at school. The teachers play an important role in monitoring the effect of drugs ,behavior and side effect , The student with ADHD, parent and teacher should understand the condition to achieve better level of education and successful in future life ⁽⁴⁾.

Objectives:

To evaluate teachers' knowledge toward ADHD and to detect the main source of the teacher's knowledge

about ADHD at Dream school in Riyadh 2015-2016.

METHODOLOGY

Study design:

This was an observational descriptive cross sectional study.

Study area:

This study was conducted at three primary schools in KSA (Riyadh), Dream international school, Al Tarbiyah Al Namouthajiyah International School and Universe International School.

Study population:

The population involved fifty one female teachers of various nationalities.

Tools and methods:

Questionnaire was pre tasted specially constructed was used in this study. The sections of the questionnaire were personal characteristics, teacher's knowledge and source of knowledge and teacher's role in ADHD. It was self-administered questionnaire.

Data analysis:

The data was cleared and analyzed by statistical package of social science (SPSS).then the results were presented in tables as categories and percentages .the chi square test was used as test of Significance. The p value less than or equal to 0.05 was considered significant.

Ethical consideration:

Ethical consideration was taken from an ethical committee at Almaarefa College,

Permission from the Schools female Managers.

And from each individual teacher.

RESULTS:

Table (1) showed 39% of the teachers' ages ranged between 20-28 years. The most common level of education was bachelor in 77%. 59% of teachers had 1-5 years of experience. About 57% took courses with or without certificate.

Table (2) shows 74.5% of teachers have heard about ADHD, and 27.5% read books about ADHD, about 37.3% read brochures about ADHD, and 49% read article about ADHD, and 56.9% learned about ADHD, and 21.6% had relatives with ADHD.

Table (3) according to teachers 73% of children pay attention during classes and about 78% had difficulty staying focused. 71% were listening when spoken to

directly and 69% were easily distracted and 57% had difficulties with playing, 61% used to lose things and 61% were uncooperative with teachers and almost 67% of them disliked engaging in work and 75% used to fidget with hands or feet or squirmed and 77% had difficulties waiting turns and 63% were talkative.

Table (4) showed that 92.2% of teachers could differentiate between children with or without ADHD. Those who could deal with ADHD students were 74.5%. Teachers capable of training other teachers were only 15.7%.

It was found that (84.6%) and (76.9%) of the teachers had attended courses about ADHD and can differentiate between normal and ADHD students and dealing with ADHD student. this differentiation does not reach to the statistical level in table (5).

Thirty eight percent of the teachers had attended courses with certificate and could train other teachers about ADHD. There is statistical association between teachers training and training others about dealing with ADHD students ($p=0.017$) in table (6).

Table (7) showed that 89% of the teachers with good level of knowledge were able to differentiate between normal and ADHD students, 73% of the teachers with good level of knowledge were capable of dealing with ADHD students, 19% of the teachers with good level of knowledge were able to train other teachers about ADHD. There were no statistical association. The study showed high prevalence of general educated teachers and low prevalence of special educated teachers.

Table (8) showed that 100% of the teacher experience from 6 to 15 years can differentiate between normal and ADHD students ,76% of the teacher experience <5 years could deal with ADHD student, and 25% of the teacher experience between 6 to 15 years could train other teachers about ADHD.

Table (1) Demographic Data of the teachers (N : 51):

Age	frequency	Percent
20-28	20	39.2
29-37	19	37.3
38-45	8	15.7
46-54	3	5.9
Missing	1	2
level of education		
diploma	7	13.7
Bachelor	39	76.5
Master	5	9.8
years of experience		
1-5	30	58.8
6-10	16	31.4
11-15	4	7.8
Missing	1	2
training		
course with certificate	13	25.5
course without certificate	16	31.4
didn't take any course	22	43.1
Total	51	100.0

Table (2) Knowledge of the Teachers about ADHD (N : 51):

hear about ADHD	Frequency	Percent
yes	38	74.5
no	13	25.5
read book about ADHD		
yes	14	27.5
no	37	72.5
read brochures about ADHD		
yes	19	37.3
no	31	60.8
Missing	1	2.0
read article about ADHD		
yes	25	49.0
no	26	51.0
learn about ADHD		
yes	29	56.9
no	22	43.1
relatives with ADHD		
yes	11	21.6
no	40	78.4
Total	51	100.0

Table (3) Symptoms of ADHD among children as reported by teachers (N : 51)

paying attention	Frequency	Percent
yes	37	72.5
no	13	25.5
Missing	1	2.0
Total	50	98.0
difficulty staying focused		
yes	40	78.4
no	11	21.6
listen when spoken to directly		
yes	36	70.6
no	15	29.4
easily distracted		
yes	35	68.6
no	16	31.4
difficulty playing		
yes	29	56.9
no	21	41.2
Missing	1	2.0
loses things		
yes	31	60.8
no	19	37.3
Missing	1	2.0
Total	51	100.0

Continued Table (3) Symptoms of ADHD among children as reported by teachers (N : 51)

uncooperative with teachers	frequency	Percent
yes	31	60.8
no	20	39.2
dislikes engaging in work		
yes	34	66.7
no	16	31.4
Missing	1	2.0
fidgets with hands or feet or squirm		
yes	38	74.5
no	13	25.5
difficulty waiting turns		
yes	39	76.5
no	12	23.5
talk excessively		
yes	32	62.7
no	19	37.3
Total	51	100.0

Table (4) Teachers Skills regarding ADHD (N : 51):

differentiating between normal and ADHD students	Frequency	Percent
yes	47	92.2
no	4	7.8
dealing with ADHD student		
yes	38	74.5
no	13	25.5
training other teachers		
yes	8	15.7
no	43	84.3
Total	51	100.0

Table (5) training regarding differentiating between normal and ADHD student and dealing with ADHD student (N : 51)

training	differentiate between normal and ADHD students		dealing with ADHD student		Total
	yes	no	Yes	No	
course with certificate	(84.6%)11	2	(76.9%)10	3	13
course without certificate	(84.6%)15	1	(76.9%)12	4	16
didn't take any course	(94.7%) 21	1	(73.7%)16	6	22
Total	47	4	38	13	51

Table (6) training regarding training other teachers about ADHD (N : 51)

training	training other teachers about ADHD		Total
	yes	no	
course with certificate	5 (38.5%)	8	13
course without certificate	0	16	16
didn't take any course	3 (7.97%)	19	22
Total	8	43	51

Table (7) Knowledge regarding differentiating between normal and ADHD students, dealing with ADHD student and training other teachers about ADHD (N : 51)

Knowledge	Knowledge regarding differentiating between normal and ADHD students		Knowledge regarding dealing with ADHD student		Knowledge regarding training other teachers about ADHD		Total
	Yes	No	Yes	No	Yes	No	
Good level of knowledge	33 89.2%	4	27 37%	10	7 18.91%	30	37
moderate level of knowledge	8	0	5	3	1	7	8
poor level of knowledge	6	0	6	0	0	6	6
Total	52	4	38	13	8	43	50

Table (8) Years of experience regarding differentiating between normal and ADHD students, dealing with ADHD student and training other teachers about ADHD (N : 51)

Years of experience	differentiate between normal and ADHD students		dealing with ADHD student		training other teachers about ADHD		Total
	Yes	No	Yes	No	Yes	No	
Years of experience 1-5	27 (90%)	3	23 (76%)	7	3 (10%)	27	30
6-10	16	0	13	3	3	13	16
11-15	4	0	2	2	2	2	4
Total	47	3	38	12	42	8	50

DISCUSSION:

In this study it was found that most of the teachers had 1-5 years of experience. A study done in Al-Khobar showed (44.2%) of the teachers had more years of experience. This contrast maybe due to the differences in the teachers' ages who participated in each study (10).

In this study it was found that a high proportion of teachers took courses about ADHD. In a similar study done in Egypt showed that almost all participants had received general teaching training courses, 63% of them had received training on dealing with ADHD in the classroom. This similarity maybe due to the similar educational level of the participants (11).

In this study it was found that more than half of the teachers heard about ADHD, learnt about it from training course and less than half of teachers had relatives with ADHD, in contrast to a study done in Egypt which showed 91.7%, 50.7% and 30.5% respectively. This difference may be due to differences in social life patterns between the countries (11).

In this study it was found that a high proportion of teachers had moderate level of knowledge about ADHD, in contrast with study done in Cape Town showed that 43% of teachers had relatively high knowledge about it, this difference may be due to differences in social life patterns and population

between the countries (8).

In this study it was found that a high proportion of teachers can differentiate between normal and ADHD student, this goes in line with a study in Riyadh that showed that 67% of teachers can also differentiate between normal and ADHD students (12).

In this study it was found that a high proportion of teachers could deal with ADHD students. This goes in line with a study done in peripheral areas of Cape Town Metropole in the Western Cape showed 66% of teachers were capable of teaching a child diagnosed with ADHD (8).

In this study it was found that a high proportion of teachers with course certificate had trained other teachers about ADHD, in contrast to a study done in Egypt that showed that only 30% of teachers had trained others (11).

High number of the teachers had attended courses with certificate. Those had a significantly better ability in training other teachers about ADHD than those who had courses without certificate or without courses. This shows the value of courses that provide certificate. While the ability to identify and deal with ADHD student was not significantly associated with years of experience or training of the teachers.

CONCLUSION:

In general the study showed that a high number of the teachers attended courses with certificate had a significantly better ability in training other teachers about ADHD than those who had courses without certificate or without courses. While the ability to identify and deal with ADHD student was not significantly associated with years of experience or training of the teachers.

REFERENCES:

- (1) Jensen PS, Hinshaw SP, Kraemer HC. *et al.* ADHD comorbidity findings from the MTA study: comparing comorbid subgroups. *Journal of the American Academy of Child and Adolescent Psychiatry.* 2001;40(2):147-158.
- (2) Martin B. Causes of Attention Deficit Disorder (ADHD). *Psych Central.* 2013. <http://psychcentral.com/lib/causes-of-attention-deficit-disorder-adhd>
- (3) Youssef MK, Hutchinson G, Youssef FF. Knowledge of and Attitudes toward ADHD among Teachers: Insights from a Caribbean Nation *SAGE Open.* 2015: 1–8 DOI: 10.1177/2158244014566761 sgo.sagepub.com
- (4) Snider V.E., Busch T , Arrowood L. Teacher Knowledge of Stimulant Medication and ADHD. *Remedial and Special Education.* 2003;24(1): 46-56.
- (5) Nur N, Kavakçı O. Elementary school teachers' knowledge and attitudes related to attention deficit hyperactivity disorder. *Health Med.* 2010;4(2): 350.
- (6) Malik HA, Al-Othman SN, Al-Jamea LM, et al. Knowledge and Behavior of Primary School Teachers Towards Attention Deficit Hyperactivity Disorder. *Bahrain Medical Bulletin.* 2013;35(3):1-6. http://www.bahrainmedicalbulletin.com/september_2013/Knowledge_Behavior.pdf (Accessed 2013-6-17.)
- (7) Munshi AM. Knowledge and Misperceptions towards diagnosis and management of attention deficit hyperactivity disorder (ADHD) among Primary School and kindergarten female teachers in AMakkah city. *International Journal of Medical Science and Public Health.* 2014; 3:434-441. DOI: 10.5455/ijmsph.2014.120220141
- (8) Louw C. General practitioners' familiarity, attitudes and practices with regard to Attention Deficit Hyperactivity Disorder (ADHD) in children and adults. *Family Practice.*2009; 51(2):152-157. DOI:10.1080/20786204.2009.10873832.
- (9) Khalil MS, Jenahi E. How teachers' knowledge of attention deficit hyperactivity disorder makes difference in doctors' diagnostic decisions and management?.*Saudi Journal of Medicine and Medical Sciences.* 2015; 3(2):151-157. <http://www.sjmms.net/text.asp?2015/3/2/151/156430> (Accessed 2016-4-13)
- (10) Shabaan N. Knowledge, Perceptions and Attitudes of Classroom Teachers towards ADHD. In: Learning in a Changing World:IOE-BNU Conference 2014, London. (Submitted)
- (11) Alkahtani K. Teachers' Knowledge and Misconceptions of Attention Deficit/Hyperactivity Disorder. *PSYCH.* 2013; 4(12):963-969. DOI:10.4236/psych.2013.412139.