

Effectiveness of an Educational Program on Primary School Teachers' Knowledge about Attention -Deficit/Hyperactivity Disorders

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Abstract

The child is one of the most important assets of the nation, the future of mankind, the source of its true power, the promotion and enhancement of the child's life and welfare is also anchored on the moral supervision and support given by his parents or guardians in order for a child to succeed, parents exert a lot of influence on their child's cognitive development in the early years, the investigator made an insight into the aim of the study as follows: To determine the effectiveness of the teaching program on teachers knowledge. The study was conducted on at governmental primary schools in Al-Najaf City/ Iraq. A total of the (10) governmental primary schools selected randomly from total (253) governmental primary schools in Al-Najaf City. A purposive (non- probability) sample of (70) primary school teachers' were selected from the candidate schools were included in the present study. During the period of 1st September 2018 to 20th February 2020. The data was collected by questionnaire which consisted of two main parts, first part consists socio demographic sheet. Second part is about knowledge which consist of (31) items scale of teachers' knowledge about children with ADHD . Findings revealed confirmed that the teachers who not attended for program about ADHD have poor level of knowledge pupils with attention -deficit/hyperactivity disorder among elementary school teachers. While the teachers who attended for program about ADHD have improve and increase knowledge about ADHD in phase two, and three. Thus, it is recommended for responsible parties to notes the need for greater efforts to teachers should trained to recognize students with behaviors problems / disorders in their classes to provide them with proper and timely education as well as necessary referral for their assessment.

Keyword: Attention deficit/ hyperactivity disorder ,Teachers, knowledge , perception; Elementary school.

Introduction

ADHD is a chronic neurodevelopment condition which is often associated with disturbed classroom behavior that can result in a range of functional difficulties for the childhood and social problems , learning disorders, externalizing behavior problems, psychological difficulties, problems with peer relations, reduced self-esteem. ^{1,2} AD/HD can occurs without a clear cause. Some theorists suggest the possibility of neurological dysfunctions as the main cause, whereas others point to family stress as the main reason for its development. ³Given the uncertainty about its origins, most researchers are now of the opinion that it has multiple and interactive causes. ⁴ AD/HD is characterized by inattentiveness, over activity, and impulsiveness. ADHD

is a common disorder, especially in boys, and probably accounts for more child mental health referrals than any other single disorder. ⁵ Symptoms include difficulty with sustained attention, being unable to complete tasks, and inability to complete chores and school. ^{6,7} . The onset of the disorders is hard to diagnosis in kids younger than four-year-old because their characteristic behavior is much more variable than that older children . ^{8,9} Teacher can be monitoring and knows child behaviors in the classrooms and other school contexts, so the teacher with parents can pay attention to the child behavior , practitioners rely on teachers to provide information to assist in establishing to observe of ADHD ,more than half of the pediatricians- on information from school reports to diagnose ADHD ^{1,10} . Because children with ADHD put great demands on family life, they may

be at higher risk for punitive responses from parents and teachers, which can increase their distress¹¹. The presence of ADHD puts the child at risk for a lifetime of maladaptive behaviors and impaired social relationships, so early identification and treatment will be important .¹¹ Every day, five days a week, children spend the majority of time in schools and interact with teachers , teachers play a vital role in the assessment of student behavior and their academic performance; therefore, they need to possess an adequate level of knowledge and understanding of the various disorders that may occur during childhood^{12,13} School is the unique setting for the early detection and effective management of ADHD children to function successfully within the classroom setting, appropriate and efficient intervention strategies are required, teachers need a broad knowledge about this condition in order to understand the needs of the children and to plan effective behavior modification strategies, studies show that interventional programs promise an increase in knowledge of teachers regarding, improved awareness and understanding by the teachers allow for a better performance of these children in the classroom, the success of these children largely resides in the hands of their teachers. This study was conducted with an aim to determine the effectiveness of the teaching program on knowledge toward ADHD to help in the early detection and effective management of children with ADHD.

Material and Method

“quasi-Experimental study “ was carried throughout the application of test-retest approach of pre-test, post-test I, and post-test II; for the both groups from the period (1 September 2018 to 20th February 2020) through implementation the educational program on primary school teachers’ knowledge towards primary school pupils with ADHD in Al-Najaf Al-Ashraf city. A purposive (non- probability) sample of (70) primary school teachers’ . The selected teachers were distributed equally into study and control groups. The study group were selected from 7 schools and the control group selected from the remaining three schools and this selection because: All the selected schools and teachers are from the same geographical area so there is no diversity in their characteristics in a degree which affect the study results. The questionnaire has been

constructed and developed as a tool for data collection . Such development was employed through an extensive review of literature ,related studies , related books ,on the study program. The final copy of the study instrument consists of the following parts: Part I : Covering letters to obtain the subjects’ agreements. Part II: Demographic information. Part III: Knowledge of Attention Deficit Disorder Scale. The third part is the consists of 31 items distributed into three domains of knowledge (general information domain(15 items), signs and symptoms / diagnosis (8 items), and the treatment (8 items),). The researcher adopted and developed the scales based on previous studies such as ^{6,13,14}. Some modifications are needed to complete the study instrument as the experts suggestions. After review and evaluation by the experts, reveal that the instrument has adequate content and major changes have been done such as number of alternative become multiple selection questions to all items according to their suggestions. The most important part in this study is the program and how it meets the needs of primary school teachers. The construction of the education program is based on the results of assessment of teachers’ needs and extensive review of related literatures, the program was constructed to achieve the objectives of the study from the period of 1st December 2018 throughout 1st January 2019. Data collection carried out from 21st /April to 24th / April 2019. The self-report measurement are used as a data collection measurement. The pre-test instrument is distributed for both the study and control groups participants. Second .Implementation phase: this phase conducted to implement the program for the study group participants only. Educational program is implemented throughout six sessions, all sessions are presented in AL-Masoudi primary school in Al-Najaf City. Two lectures every week on Sunday and Thursday.. Third . Evaluation phase: this phase is conducted through applying post-test1 and post-test 2. The post-test 1 conducted after application of the program for both study and control groups. While the post-test2 is conducted after three months from the post-test1for both study and control groups. Before that the researcher distribute a booklet for the study group participants. The post-test1 is conducted in 30/May/2019. While the post-test 2 conducted in 29/ August/2019.

Results

Table(1). Distribution of (study and control group) according to their knowledge over three test.

Test	Study						Control						total	
	Poor		Fair		Good		Poor		Fair		Good			
	F.	%	F.	%	F.	%	F.	%	F.	%	F.	%	F.	%
Pre -test	28	40	6	8	1	1	29	41	5	7	1	1	70	100
Post-test -I	1	1	4	5	30	42	17	24	18	25	0	0	70	100
Post-test -II	0	0	7	10	28	40	16	22	19	27	0	0	70	100

This table shows the level of knowledge between study and control groups over three trials. the level of knowledge about ADHD at pre-test is 40 % of teachers have poor level in control group and (41%) of teachers have poor level from study group . Concerning post-test I the table shows that 42% of study group have good level of knowledge while (25%) of control group have fair level of knowledge. Finally, the post-test II indicates that the teacher’s knowledge about ADHD between study and control group were similarly at post-trial I.

Table 2.Comparison of total knowledge between study and control group.

Test	Study	Control	Independent t-Test (df)	P-value
	Mean ± SD	Mean± SD		
Pre	0.33±0.129	0.34±0.124	-0.255 (68)	0.78
Post-I	0.53±0.114	0.35±0.123	6.244 (68)	0.0001
Post-II	0.57±0.090	0.35±0.089	10.166 (68)	0.0001

This table indicates highly significant differences between the study group and control group at (post-trial- I and post-trial- II), (p value ≤ 0.05), in same table, there is a non statistically difference between study group and control group regarding their teacher’s knowledge about ADHD at (pretest).

Table. 3. Repeated Measures ANOVA Tests for teacher’ knowledge about ADHD (Total Knowledge).

Knowledge	Repeated Measures ANOVA Tests			
	F	p	size effect (d)	Observed power
Main time effect	48.328	0.001	0.415	1.00
Between groups effect	40.336	0.001	0.372	1.00
Groups Interaction overtime	41.655	0.001	0.554	1.00

The results of table 3 show that: 1- The within subjects test indicates that the interaction of time and group is significant ($F= 48.328, p= 0.00$). 2- The main effect of time is significant ($F= 40.336, p= 0.00$). 3- The between groups test indicates that there the variable group is significant ($F= 41.655, p= 0.00$). The significant interaction indicates that the control group and study group are changing over time.

Discussion

Shows the level of knowledge between study and control groups over three test. It's clear that the level of knowledge about ADHD at pre-test was poor in study and control groups. Concerning post-test I the table (1) reveals that most of the study group (42%) .They have good level of knowledge in comparison with control group (25%), they have fair level of knowledge. in comparison with control group which, are having a fair level of knowledge. While post-test II indicates that the teacher's knowledge about ADHD between study and control group after three months from education program were similarly at post-trial (study group were 40% compare with control group 22%) . This finding were consistent with ¹, under the tattle 'Effect of AD/HD training program on the knowledge and attitudes of primary school teachers'', who found that the intervention group had significantly higher post-intervention scores on knowledge of ADHD, compared with the control group. As our expectation the result of present study shows not significant differences between study group and control group at (pre-test) for knowledge ($t= (-0.255)$ and $t= (1.303)$, P. value was more than 0.05), because both of them do not attend the educational program about ADHD. The result of the present study indicate highly significant differences between study group and control group at (post-test I and post test-II) for knowledge ($t= (6.244)$ and $t=(10.166)$, both P. values were less than 0.05). our result enhanced the implementation of education program about ADHD among school age (table2). So, their responses have been improved directly post the complication of the education program in the classroom. The results of the present study are supported by the study of ¹⁶,who found significant differences between the pre-test and post-test knowledge of ADHD among teachers who attended education programs on ADHD, also the study of the¹⁷, found before and after the training program, and 35 of them filled it out at the 6-month interval. Mean scores of these tests were compared using an a paired t-test. The authors found the difference of mean score

of 1.48 ± 2.95 , and this was statistically significant ($p < .005$), authors conclude that the workshop improved the knowledge of the school teachers regarding ADHD symptomatology, and it remained significant even after 6 months of training. (Table 3). With regard to the repeated measures of ANOVA, the study results indicate that there is a significant difference in teachers' knowledge regarding ADHD between the three levels of measurements (pre-test, post-test I, and post-test II) among the study group ($F=48.328, p.value=0.001$) which indicate that the study group participants exhibit a good knowledge at the post-test I and post-test II compared with pre-test. This may be because the teachers' length of exposure to educational programs and presentations on behavioral disorders of pupils with ADHD, however, the booklet was given to each teacher for the study group to help with reviewing and support teaching at home, was more effective in improving knowledge of behavior management of students with ADHD ,it had a positive impact and a strong relationship with accepted useful teacher knowledge. These results agree with ¹⁸.The studied the Hispanic teachers'' perception toward child with ADHD, their results indicate that there is a statistically difference through using the repeated measure of ANOVA between the study and control groups. i.e. the study group present a good knowledge at the post-test compared with the control group participants. Conclusion:. Findings revealed confirmed that the teachers who not attended for program about ADHD have poor level of knowledge to pupils ADHD among elementary school teachers. While the teachers who attended for program about ADHD have improve and increase their knowledge about ADHD in phase two, and three. Thus, it is recommended for responsible parties to notes the need for greater efforts to teachers should trained to recognize students with behaviors problems / disorders in their classes to provide them with proper and timely education as well as necessary referral for their assessment. The nurse and the family of children as well as their teachers should be cooperate to detect what exact problems are facing child with ADHD and give proper intervention and relying more on observational methods than on subjective reports by the parents. Arrange an orientation programme for teachers to on various behavioral problems among primary school children is needed.

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Conflict of Interest: None to declare.

Ethical Clearance: “After the administrative arrangements are completed, acceptance of teachers participants was sought for after explaining to them the aim of the study and inform them that all the information taken will be treated confidentially and it is for research purposes only ,then taken the consent from them to participate in this study. Also, an ethical approval was obtained from ethical committee of research in Faculty of Nursing University of Babylon regarding confidentiality and anonymity of participants”.

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