



Effectiveness of Instruction Program on Teachers' Performance toward Counseling for Primary School Pupils with Attention Deficit and Hyperactivity Disorder

Ali Abed Kadhim*, MscN; Lujain Anwar Alkhazrajy**, PhD

* Ministry of Health, Iraq

** University of Baghdad, Al-Kindy College of Medicine

ARTICLE INFO

Article history:

Received 2 February 2023

Accepted 25 June 2023

Keywords:

Effectiveness,
Teachers'
Performance,
Counseling,
Attention Deficit
and
Hyperactivity
Disorder,
Nursing

ABSTRACT

Objective(s): the study aims to evaluate teachers' performance of counselling for primary school pupils with ADHA; to determine the effectiveness of the program on teachers' performance of counselling, and to identify the relationship between teachers' performance and their demographic characteristics of age, gender, education levels and years of employment.

Methodology: A quasi-experimental (pre-posttest) design was carried out at Al-Firdous mixed primary School The study was started from March 28th 2022 to April 24th 2023. The sample was non-probability (purposive sample) of (60) teachers. The data were collected before and after the application of the program by direct interview using constructed questionnaire. Instruction program is designed on the basis on the results of teachers' need assessment, and from review of the relative scientific literature and previous studies. A panel of (10) experts to determine the content validity of an early-stage instrument. Cronbach alpha is used to determine the questionnaire's reliability; a correlation coefficient is calculated (0.908). Data were collected through the utilization of the study instruments and the application of the interview and self-report technique. Version (SPSS) of the software program was used to examine the data (25).

Results: Analysis of the study data indicates The effectiveness of the instruction program is reflected at all three time periods, the performance of teachers on the pretest was poor, but improved significantly on the posttest I and posttest II. There are significant variations between pre and posttest I and posttest II of the research sample ($P = 0.001$), indicating a high degree of significance, these demonstrate the effectiveness of the educational program. It was found that there are differences between the study group and the control group, which show that the relationship between teachers' performance and demographic characteristics shows a high statistically significant relationship between teachers' performance and (age, years of employment) variables.

Conclusions: The findings of the study demonstrated considerable effectiveness of the instruction program on teachers' performance for providing counseling to pupils with attention deficit hyperactivity disorder. Some demographic characteristics, such as teachers' ages and Years of employment, exhibited a substantial positive link with their post-assessment performance.

Recommendations: The program can be utilized as an effective tool to improve these teachers' performance about attention deficit and hyperactivity disorder nation-wide. Further research can be conducted on large sample size with different characteristics.

فاعلية البرنامج الإرشادي في أداء المعلمين تجاه المشورة لتلاميذ المدارس الابتدائية ذوي قصور الانتباه واضطراب فرط الحركة

المستخلص

الأهداف: الدراسة تهدف الى تقييم أداء المعلمين لتقديم المشورة لتلاميذ المدارس الابتدائية ذوي قصور الانتباه واضطراب فرط الحركة في مديرية تربية الرصافة الأولى . لتحديد مدى فاعلية البرنامج في أداء المعلمين لتقديم المشورة لتلاميذ المدارس الابتدائية ذوي قصور الانتباه واضطراب فرط الحركة. وتحديد العلاقة بين أداء المعلمين لتقديم المشورة لتلاميذ المدارس الابتدائية ذوي قصور الانتباه واضطراب فرط الحركة وخصائصهم الديموغرافية مثل العمر والجنس ومستويات التعليم وسنوات التوظيف.

منهجية البحث: تم تنفيذ تصميم شبه تجريبي (اختبار قبلي بعدي) في مدرسة الفردوس الابتدائية المختلطة بدأت الدراسة من 28 اذار 2022 إلى 24 نيسان 2023. كانت العينة غير احتمالية (عينة هادفة) من (60) معلما. تم جمع البيانات قبل وبعد تطبيق البرنامج عن طريق المقابلة المباشرة باستخدام الاستبانة تم بنائها من قبل الباحث. تم تصميم برنامج التعليمي على أساس نتائج تقييم حاجة المعلمين ، ومن المعلومات التي تم الحصول عليها من مراجعة الأدبيات والدراسات السابقة. لائحة من (10) خبراء لتحديد صحة الاستبانة. واستخدم كرونباخ ألفا لتحديد موثوقية الاستبانة ؛ تم حساب معامل الارتباط (0.908). تم جمع البيانات من خلال استخدام أدوات الدراسة وتطبيق تقنية المقابلة والتقرير الذاتي كطريقة لجمع البيانات في مرحلة ما بعد الاختبار الأول وما بعد الاختبار الثاني للفترة من 18 ايلول 2022 إلى 24 تشرين الثاني 2022. تم استخدام برنامج التحليل الاحصائي الاصدار (25). عن طريق الإجراءات الإحصائية الوصفية من خلال تحديد التكرارات والنسب المئوية والوسط الحسابي والانحراف المعياري وتحليل البيانات الإحصائية من خلال تطبيق اختبار (T) وتحليل التباين (ANOVA) المستخدم لتحديد العلاقة بين الخصائص الاجتماعية والديموغرافية وأداء المعلمين.

النتائج: يشير تحليل بيانات الدراسة إلى أن فعالية برنامج التعليمي انعكست في جميع الفترات الزمنية الثلاث حيث كان أداء المعلمين في الاختبار القبلي ضعيفا ، لكنه تحسن بشكل كبير في الاختبار البعدي الأول والثاني. و كان هناك فروق كبيرة بين ما قبل وبعد الاختبار الأول وما بعد الاختبار الثاني لعينة البحث عند ($P = 0.001$) ، مما يشير إلى درجة عالية من الدلالة الإحصائية وهذه تثبت فعالية البرنامج التعليمي. وجد ايضا أن هناك فروق بين مجموعة الدراسة والمجموعة الضابطة ، والتي تظهر أن العلاقة بين أداء المعلمين والخصائص الديموغرافية علاقة ذات دلالة إحصائية عالية لكل من متغيري العمر و سنوات التوظيف.

الاستنتاجات: أظهرت نتائج الدراسة تأثيرات إيجابية كبيرة لبرنامج التعليمي على أداء المعلمين لتقديم المشورة لتلاميذ ذوي قصور الانتباه واضطراب فرط الحركة. أظهرت بعض الخصائص الديموغرافية ، مثل أعمار المعلمين وسنوات التوظيف ، ارتباطاً إيجابياً جوهرياً بأدائهم بعد التقييم.

التوصيات: يمكن استخدام البرنامج كأداة فعالة لتحسين أداء المعلمين حول قصور الانتباه واضطراب فرط الحركة على مستوى دوله. يمكن إجراء المزيد من البحث على حجم عينة كبير بخصائص مختلفة.

الكلمات المفتاحية: فاعلية ، أداء المعلمين ، الإرشاد ، اضطراب فرط الحركة ونقص الانتباه

Introduction

The instructional program assumes a significant part in fostering educators' experience in giving counsel on behavioral disorders among pupils after the rising numbers of understudies with Attention Deficit Hyperactivity Disorder (ADHD) compromised with their adverse consequences straightforwardly, which prompts the confront educators these pupils. Attention deficit hyperactivity disorder issues one of the commonest issues confronting pupils specifically and upsetting their folks and teachers overall. This is on the grounds that Iraqi individuals have for quite some time been living in troublesome circumstances and

confronted different psychological activities. Such activities are supposed to be one reason adversely influence the mind of the pupils^{(1) (2)}.

Mental health is significant for accomplishing success. Children are the weakest population. These circumstances were bothered by the pressure and dread during the conflicts and the occasions of vicious acts and confusion. Total experience of war injury comprises a gamble factor for proceeding with mental unsettling influences. Consideration shortage hyperactivity jumble. This issue is habitually determined in pupils to have other

conduct issues or in the people who underachieve at school ⁽³⁾.

The most well-known mental condition affecting pupils is probably attention deficit hyperactivity disorder (ADHD) is perhaps of the most well-known mental problem influencing pupils. It is characterized by persistent inattention, hyperactivity, and impulsivity, leading to educational disabilities in affected children. It incorporates three discernible subtypes: heedless, hyperactive, or combined. Albeit numerous children go undiscovered with ADHD by the preschool age, ADHD is one of the most widely recognized types of handicap among understudies and is decisively expanding in the classroom ⁽⁴⁾.

ADHD is a neuropsychiatric syndrome that affects children, teenagers, and even adults across the globe. It is defined by a persistent degree of hyperactivity, impulsivity, and inattention. Blum et al. argued that the etiology or foundation of ADHD is an impulsive disorder with hereditary components and neurotransmitter imbalance ⁽⁵⁾. It is one of the most prevalent behavioral problems in children ⁽⁶⁾. (3–7%) of school-aged pupils are affected. Children with ADHD are susceptible to issues such as poor academic performance, academic failure, class repetition, delayed learning, low self-esteem, poor social skills, and an increased risk of juvenile physical damage ⁽⁷⁾.

ADHD is a common condition among children, and anybody who supervises pupils will undoubtedly come across it. It is a disorder that develops from a combination of normal and inherent factors. Expecting pupil with ADHD to be identified early and proper therapies to be implemented, the problem should be mitigated. In school, a student's disciplinary troubles slow down his progress and may disturb other students. Some believe addressing conduct concerns to be the most challenging aspect of an educator's workday, since they usually overwhelm teachers, particularly novices. Teachers struggle tremendously with discipline concerns. Fostering an organized system for addressing conduct concerns may aid educators in controlling classroom difficulties and fostering a general manner of behaving that contributes to an increase in academic accomplishment ⁽⁸⁾ ⁽⁹⁾.

In the past years, attention deficit disorder and hyperactivity have taken a great interest in the fields of education, psychology and pediatrics, which has negative effects on children's behavior and poor academic achievement ⁽¹⁰⁾.

The role of a teacher is vital as an aide, as a guide. Successful execution of an educational plan is relying upon the educators who convey the educational plan. An educator dissipates dimness carries edification and assists the understudy with picking the right way ⁽¹¹⁾.

The teacher assisting position brings students closer. Direction matched with the school's educational plan may improve the teaching-learning experience and make a student's school program more meaningful. Generally speaking, the role of educators is to aid students in progressing by imparting knowledge and creating an environment in which students may and will develop effectively. Despite the fact that teachers have a variety of responsibilities, one of their skills is directing and counseling. The purpose of guidance and advising is to facilitate the development of students' autonomy, particularly with regard to emotional and behavioral issues in the classroom and academic accomplishment ⁽¹²⁾⁽¹³⁾.

Previous studies conducted on pupils in Iraq who suffer from behavioral disorders show that this field still needs more studies to increase the number of these students in the classroom, and there has become an urgent need to search for effective methods to reduce behavioral problems and develop pupils' abilities. Pupils who suffer from behavioral disorders always need counsel from teachers because they suffer from problems and challenges such as higher rates of being disciplined, lower academic achievement and graduation rates, increased relational difficulties with peers and adults, greater likelihood of mental health concerns, higher incidence of criminal behavior, numerous negative physical health outcomes ⁽¹⁴⁾.

The current study aims to evaluate teachers' performance of counseling for Primary School Pupils with Behavioral Disorders in Al-Rusafa First Education Directorate, and determine the effectiveness of

the instruction program on teachers' performance of counseling.

Methodology

A quasi-experimental (pre-posttest) design conducted at Al-Firdous elementary school for mixed students. The College of Nursing University of Baghdad's research ethics committee and The First Rusafa Education Directorate / Department of Preparation and Training have granted ethical permission.

Teachers who participated in the study and signed permission forms acknowledged that their participation was voluntary and that their information would be kept confidential and used only for research reasons. Included in the study were (60) teachers, (30) for each of a study and control group and who want to enhance their counseling performance on Attention Deficit Hyperactivity Disorder. Non-probability sampling was used to choose personnel (purposive sample).

Questionnaire structure comprises from part (1) socio-demographic characteristics, including age, gender, level of education, and years of employment, as well as part (2) Evaluation of teachers instructors' performance toward Attention Deficit Hyperactivity Disorder, which includes ten questions, using True/False Scale; they are rated and scored as (2) for True answers, and (1) for False answer. Data collection was done for the period from September 18 to November 24, 2022. Data were gathered via direct interviews with the teachers. The tool as a questionnaire was designed for the purpose of the study.

Instruction program is designed on the basis on the results of teachers' need assessment, and from information obtained

from the review of the relative scientific literature and previous studies. The instructional program has been designed to promote teachers' performance .The instructional program was implemented through four sessions. Each session takes approximately (40-45) minutes and all sessions are presented in one of the classrooms of Al-Firdous primary mixed school. Teaching materials used in these sessions include (lectures, white board, computer laptop, Booklet) at 9:00 o'clock for the period from 18th September 2022 to 24th November 2022. A panel of (10) experts with at least five (5) years of expertise in their respective fields reviews the questionnaire's clarity, relevance, and appropriateness to determine the content validity of an early-stage instrument. Cronbach alpha is used to determine the questionnaire's reliability; a correlation coefficient is calculated (0.908). Data are collected through the utilization of the study instruments and the application of the interview and self-report technique as means of data collection. All teachers, who have been selected Primary schools for special education, are interviewed and exposed to pre-test in order to assess the teachers' performance toward ADHD. Then the study group is exposed to instructional program at the same time, and the teachers of the control group are not exposed to the program. Both groups, in the study, are exposed to post-test I after the implementation of the instructional program. Both groups, in the study, are exposed post-test II after approximately one month of post-test I.

Statistical Analysis: Frequency distributions, percent, mean, standard deviation, T-test, and AVOVA were used to examine and evaluate the outcomes of the research using the statistical package (SPSS) version 25. A P-value of 0.05 or less was regarded as statistically significant

Results

Table (1): Distribution of the Teachers' Demographic Characteristics

List	Demographic Characteristics	Study group		Control group	
		F	(%)	F	(%)
1	Age (year)				
	20 – 29	2	6.7	3	10.0
	30 – 39	8	26.7	9	30.0

	40 and >	20	66.7	18	60.0
	Total	30	100.0	30	100.0
2	Gender				
	Male	15	50.0	15	50.0
	Female	15	50.0	15	50.0
	Total	30	100.0	30	100.0
3	Years of Employment				
	1 – 10	7	23.3	4	13.3
	11 – 20	3	10.0	4	13.3
	21 – 30	20	66.7	21	70.1
	31 and >	0	0	1	3.3
	Total	30	100.0	30	100.0
4	Level of Education				
	Diploma	26	86.7	25	83.3
	Bachelor	3	10.0	3	10.0
	Higher Diploma	1	3.3	2	6.7
	Master	0	0	0	0
	Doctorate	0	0	0	0
	Total	30	100.0	30	100.0

F=Frequency, (%) = percentage

This table demonstrates that the majority (20) of teachers in the study group (66.7%) are within the age group (40 and older), compared to the majority (18) of teachers in the control group (60%). Males and females make up 50% of the teachers in both the research and control groups. The majority of teachers in the control group are (21 - 30) (21) (70.1%), compared to (20) (66.7%) in the research group. In terms of degree of education, the majority of teachers in the research group (26; 86.7%) have a diploma, compared to the control group (25; 83.3%).

Table (2): Significant Comparison of Teachers' Performance between Three Periods (Pre-test, Posttest I and Posttest II) for the Study Group and Control Group

Teachers' Performance about ADHD	Study Group (n=30)					Control Group (n=30)				
	Mean	t	df	P-value	Sig.	Mean	t	df	P-value	Sig.
Pre-test	1.205	13.449	29	0.000	HS	1.222	0.571	29	0.571	NS
Post-test I	1.816					1.227				
Pre-test	1.205	14.419	29	0.000	HS	1.222	0.183	29	0.856	NS
Post-test II	1.833					1.261				

df= Degree of freedom, t=t-test value, P= Probability level (P value \leq 0.05), C.S.: Comparison Significant, NS: Non Significant at $P \geq$ 0.05, S: Significant at $P \leq$ 0.05, HS: Highly Significant at $P <$ 0.01.

This table demonstrates that there is a statistically significant difference ($P <$ 0.05) between the three periods (Pre-test, Posttest I, and Post II) for the research group's performance in addressing Attention Deficit Hyperactivity Disorder (ADHD) among teachers of the study group, ; while there are no significant statistical differences among the three periods (pre-test, posttest I, posttest II) of the control group.

Table (3): Relationship between Teachers' Performance and Their Age, Years of Employ in the Study and Control Groups

Teachers' Performance		Study Group (n=30)						Control Group (n=30)					
		Sources of Variance	Sum of Square	df	Mean Square	F	P≤ 0.05	Sources of Variance	Sum of Square	Df	Mean Square	F	P≤ 0.05
Age	Pre-test	Between Group	0.168	2	0.084	2.429	0.107	Between Group	0.079	2	0.039	1.211	0.313
		Within Group	0.592	27	0.022			Within Group	0.875	27	0.032		
		Total	0.760	29				Total	0.954	29			
	Post-test I	Between Group	0.201	2	0.100	17.261	0.000	Between Group	0.058	2	0.029	1.356	0.275
		Within Group	0.157	27	0.006			Within Group	0.575	27	0.021		
		Total	0.358	29				Total	0.633	29			
	Post-test II	Between Group	0.468	2	0.234	11.232	0.000	Between Group	0.051	2	0.026	1.323	0.283
		Within Group	0.562	27	0.021			Within Group	0.522	27	.0190		
		Total	1.030	29				Total	0.573	29	0.039		
Years of Employ	Pre-test	Between Group	0.166	2	0.083	2.947	0.069	Between Group	0.028	3	0.009	0.264	0.851
		Within Group	0.594	27	0.022			Within Group	0.925	26	0.036		
		Total	0.760	29				Total	0.954	29			
	Post-test I	Between Group	0.282	2	0.141	49.989	0.000	Between Group	0.014	3	0.005	0.189	0.903
		Within Group	0.076	27	0.003			Within Group	0.619	26	0.024		
		Total	0.358	29				Total	0.633	29			
	Post-test II	Between Group	0.709	2	0.355	29.845	0.000	Between Group	0.015	3	0.005	0.228	0.876
		Within Group	0.321	27	0.012			Within Group	0.558	26	0.021		
		Total	1.030	29				Total	0.573	29			

n: Group Size, df: Degree of freedom, F: F-Statistic, P: Probability value

This table demonstrates that there is a statistically significant relationship between teachers' age, years of employment, and teachers' performance in addressing Attention Deficit and Hyperactivity Disorder at (posttest I and posttest II) but not at (pre-test) in the study group ($p < 0.05$), whereas there is no statistically significant relationship between teachers' age, years of employment, and teachers' performance in addressing Attention Deficit and Hyperactivity Disorder in the control group.

Discussion

Analysis of such features indicates that the majority (20) of teachers in the study group (66.7%) are within the age group (40 and

older), while the majority (18) of teachers in the control group (60%) are within this age range. This data indicates that these teachers are of middle age and have been in the

workforce for a considerable amount of time. Regarding gender, both the research and control groups include fifteen (50%) males and females. Regarding years of employment, the majority of teachers in the control group (21; 70.1%) are employed for longer than those in the research group (20; 66.7%). Regarding degree of education, the majority of teachers in the research group (26) (86.7%) has a diploma, compared to the control group (25) (83.3%). This data indicates that the majority of teachers are graduates of the Institute for teacher preparation.

Employing a quasi-experimental approach (two group pre-posttest), determine the effectiveness of a structured education program on the knowledge, attitude, and behavior strategies of government-employed primary school teachers. The convenience sample consisted of sixty primary school teachers from five elementary schools. The results suggested that the planned program had a significant positive impact on the teachers' knowledge, attitudes, and strategies for regulating the behavior of children with ADHD. Some demographic factors, such as age, education, and teaching experience, were significantly and positively associated with post-test teacher knowledge.⁽¹⁵⁾

The effectiveness of the instruction program is reflected in the table (2) for all three time periods, the performance of teachers on the pretest was poor, but improved significantly on the posttest I and posttest II. There are significant variations between pre and posttest I and posttest II of the research sample ($P = 0.001$), indicating a high degree of significance.

Findings in a study indicated that (105) starting teachers were exposed to a training program. The research hypotheses were tested using paired-samples T tests at the (0.05) level of significance. The findings revealed substantial, favorable outcomes for all of the parts, suggesting that the training element of the program was a success.⁽¹⁶⁾

A results of a study showed that the educational program was quite successful; between the pre- and post-test scores of the study group, there was a statistically significant change. There were a total of sixty parents split into two groups for this quasi-experimental research of an educational intervention⁽¹⁷⁾.

It was found that there are statistically significant differences between the study group and the control group, which is consistent with the findings of table (3), which show that the relationship between teachers' performance and demographic characteristics shows a high significant relationship between teachers' performance about ADHD and age as well as years of employment.

In a few Delhi schools, a pre-experimental study was conducted on a sample of (35) elementary school teachers. During the fifteen days that the teachers were exposed to the educational program, it became clear that learning was greatly influenced by age and experience⁽¹⁸⁾.

Conclusion

The study confirms that the instruction program is an effective method for enhancing teachers' performance toward ADHD in providing counseling for those pupils. Some demographic characteristics, such as teachers' ages and years of employment, exhibited a substantial positive link with their post-assessment performance.

Recommendations

The program can be utilized as an effective tool to improve these teachers' performance about attention deficit and hyperactivity disorder nation-wide. Further research can be conducted on large sample size with different characteristics.

Conflict of Interest

None.

Funding

This research received no specific fund from any funding agency in the public, commercial or not-for-profit sectors.

References

1. Mamadi, S. The effectiveness of a counseling program in reducing symptoms of attention deficit hyperactivity disorder among fourth year primary school pupils. *Journal of Neuropsychology* 2013, 2(1), 49-76.

2. Muhammad, S. H., & Saleem, A. D. The Commonest Negative Behavioral Manifestations among Kindergarten Children in the Post-Terrorist Phase. *Journal of the College of Education for Women* 2021, 32(3), 99-112. <https://doi.org/10.36231/coedw.v32i3.1519>.
3. Maliha, M., & Wahid, S. S. Behavioral Disturbances among School Children in Baghdad Province. *AL-Kindy College Medical Journal* 2019, 5(1), 52-56.
4. Zadin, A. P. D. A. I. Artistic expression in diagnosing behavioral disorders for elementary school pupils an applied study. *PalArch's Journal of Archaeology of Egypt/Egyptology* 2021, 18(4), 5457-5471.
5. Jawad, S. Q., Mutlak, S. S., & Hussein, S. I. Study the Association of Serotonin and Serotonin Transporter Concentration with Attention Deficit Hyperactivity Disorder in Sample of Iraqi Primary School Children. *International Journal of Medical Research & Health Sciences* 2019, 8(1), 122-126.
6. Adnan, H., & Rashak, K. Screening for Attention Deficit Hyperactivity Disorder at Elementary Schools in Baghdad City. *Iraqi National Journal of Nursing Specialties* 2020,33(2),13-21. <https://doi.org/10.58897/injns.v33i2.411>.
7. Alwan, I. H. Knowledge of Parents toward Children with Attention Deficit Hyperactivity Disorder in Baghdad City. *Indian Journal of Forensic Medicine & Toxicology* 2020, 14(3), 1531-1534. <https://doi.org/10.37506/ijfmt.v14i3.10628>.
8. Faris, M. Assessment of Some Salivary Biomarkers and Cortisol in Sample of Children with Attention Deficit Hyperactivity Disorder in Al-Diwaniya city (Doctoral dissertation, University of Baghdad) 2017
9. Sharma, N., & Sharma, V. D. Behavioral problems in school children as recognized by untrained teachers. *Journal of Psychiatrists' Association of Nepal* 2013, 2(2), 26-28. <https://doi.org/10.3126/jpan.v2i2.9722>.
10. Al-jumaiali, M. H. Attention Deficit Hyperactivity Disorder (ADHD) of Primary School Pupils. *Journal Of Educational and Psychological Researches* 2020, 17(66). https://doi.org/10.1007/springerreference_223371
11. Ghafel, H. H. Evaluation of Elementary School Teachers' Knowledge about Signs and Symptoms of Attention Deficit Hyperactivity Disorder in AL-Diwaniyah City. *Mosul Journal of Nursing* 2022, 10(2), 243-248. <https://doi.org/10.33899/mjn.2022.175572>.
12. Singh, S. P., & Nisha. The Role of a Teacher in Teaching As a Counsellor. *Journal of Interdisciplinary Cycle Research* 2020, 12(9), 1817-1825.
13. Nuroniah, P. P., Nuroniah, P., Ramdhani, R. N., & Nadhirah, N. A. Guidance and Counseling Teacher's Role and Function within Disruption Era. In 5th International Conference on Education and Technology 2019, 522-525. <https://doi.org/10.2991/icet-19.2019.132>.
14. Alanzi, B. J. Effectiveness a training program to improve level of teacher's knowledge to behavioral, educational and social traits among students of conduct disorder. *JASHT* 2020, 123-171.
15. Shehata, A., Mahrous, E., Farrag, E., & Hassan, Z. Effectiveness of structured teaching program on knowledge, attitude, and management strategies among teachers of primary school toward children with attention deficit hyperactivity disorder. *IOSR Journal of Nursing and Health Science* 2016, 5(6), 29-37.
16. Leblanc, L., Richardson, W., & Burns, K. A. Autism spectrum disorder and the inclusive classroom: Effective training to enhance knowledge of ASD and evidence-based practices. *Teacher education and special education* 2019, 32(2), 166-179. doi:10.1177/0888406409334279.
17. Arrar, S. R., & Khudhair, S. H. Effectiveness of an Instructional Program on Behaviors of Parents Toward Children with Attention Deficit Hyperactivity

Disorder in Autism Centers at Baghdad City. *Pakistan Journal of Medical & Health Sciences* 2022, 16(05), 528-528. <https://doi.org/10.53350/pjmhs22165528>.

18. Daniel, L. T., Gupta, S., & Sagar, R. Effect of educational module on knowledge of primary school teachers regarding early symptoms of childhood psychiatric disorders. *Indian Journal of Psychological Medicine* 2013, 35(4), 368-372. <https://doi.org/10.4103/0253-7176.122228>.