

A pre-experimental study to assess the effectiveness of planned teaching program regarding attention deficit hyperactivity disorder among primary school teachers in selected school, Moradabad, U.P.

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Abstract- The neurodevelopmental condition attention deficit hyperactivity disorder (ADHD) is prevalent among school-age children globally. The study aimed to assess the effectiveness of a planned teaching program on knowledge regarding ADHD among primary school teachers in selected school in Moradabad, Uttar Pradesh, India. The research approach used was quantitative, employing a pre-experimental design called a survey. The sample size consisted of 30 school teachers from selected school. The planned teaching program included interactive workshops and presentations covering various aspects of ADHD. The results showed a significant increase in knowledge regarding ADHD among the primary school teachers after the planned teaching program. The study emphasized the importance of targeted teacher training programs to enhance understanding of neurodevelopmental disorders like ADHD and promote inclusive educational environments. This chapter deals with the analysis and interpretation of data obtained from 30 participants' levels of knowledge regarding attention deficit hyperactivity disorder among primary school teachers in selected school in Moradabad, U.P. In order to find a meaningful answer to the research problem, the data was processed and analyzed based on objectives. The study showed that the mean pre-test knowledge score was 4.66, and the mean post-test knowledge score was 18.56. The difference between the pre- and post-test knowledge scores was statistically significant. Overall, the planned teaching program had a positive influence on teachers' knowledge about ADHD, potentially leading to improved educational experiences for students with ADHD and fostering more inclusive learning environments.

Keywords: Attention Deficit Hyperactivity Disorder (ADHD), school-age children, planned teaching program, primary school teachers.

INTRODUCTION

The neurodevelopmental condition Attention Deficit Hyperactivity Disorder (ADHD) is prevalent among school-age children globally. Children with ADHD frequently struggle to maintain focus, rein in impulsive behavior, and display hyperactivity. These difficulties may significantly impact their academic performance, social relationships, and general well-being. To help children with ADHD in their schooling and enable their success in the classroom, early detection and appropriate therapies are essential. Primary school instructors are among the important parties responsible for detecting and helping pupils with ADHD. Teachers are essential in fostering a positive learning environment and modifying instructional approaches to cater to the various learning demands of their pupils. Studies have revealed that many instructors, however, lack sufficient knowledge of ADHD, making it difficult to identify and successfully meet the requirements of students who have the condition.

Children are a precious gift; their potential is shaped by love and care. Childhood is a dynamic phase marked by change and challenges. Attention deficit hyperactivity disorder (ADHD) is a prevalent condition affecting children aged 5-12 years. It is a psychiatric disability characterized by inattention, hyperactivity, and impulsivity. Teachers' attitudes toward students with behavioral issues can impact their development. Primary school age (6-10 years) is a critical period for shaping behavior. ADHD affects children's school performance and can persist into adulthood. ADHD involves difficulty paying attention, excessive activity, and impulsive behavior. Its clinical presentation evolves throughout life, affecting daily functioning. While ADHD can pose challenges, with proper management, it can be effectively treated.

The condition affects between 2% and 7% of the world's population, on average, with a prevalence of roughly 5%. All ages are affected by ADHD, and symptoms often start to show as early as 3 years old. From mild to severe, the symptoms might last well into adulthood. The impact, prevalence, and treatment choices of the disorder vary depending on the demographic group affected, including variances in age, gender, race, and ethnicity. There are several drugs on the market specifically designed to treat ADHD. Treatment options for ADHD vary from behavioral treatments to prescription medication. The review also emphasizes the problems with medication relapse and safety concerns, as well as the difficulties with diversity and socioeconomic obstacles in the diagnosis and treatment of the disorder.

Several studies have linked irregular attendance at school to short- and long-term negative outcomes, such as worse grades, a higher risk of dropping out, and difficulties navigating the economy, society, and emotions as an adult. A type of self-initiated opposition to going to school known as "school refusal behavior" (SRB) is driven by both positive and negative reinforcement (RA and RC). ADHD affects 5–12% of school-age children globally, and children and teens who have the disorder have higher absenteeism and school refusal rates than their peers. ADHD is associated with a 25%–33% higher chance of developing an anxiety condition.

Understanding the underlying causes of students' absences from school may enable targeted interventions to improve long-term outcomes. Anxiety disorders are more common in people with ADHD, which might make it more likely that a child would choose not to attend school. In order to improve school refusal behavior,

Attention deficit hyperactivity disorder (ADHD) is a common childhood psychiatric disorder affecting children aged 5–12 years. In India, primary school teachers have limited knowledge about ADHD, with 46.9% believing it is due to biological and genetic vulnerabilities, and 53.1% claiming it is the result of parental spoiling. The general perception towards children with ADHD is poor, and 64.8% of respondents feel that ADHD pupils should be subject to the same disciplinary measures as other students. ADHD affects nearly 8% of US children aged 4-7 years. Understanding the cause and prevention of ADHD is crucial, as it affects a child's future and can lead to negative perceptions of the world. Risk factors include genetics, society, and the environment. Current models suggest that ADHD is associated with functional impairments in some brain neurotransmitter systems, particularly dopamine and norepinephrine. School counselors play a crucial role in developing 504 plans and recommending accommodations for students with ADHD in school settings. ADHD affects up to 15 male children in the U.S., and there is a significant amount of misleading information about the condition.

ADHD affects up to 15 male children in the U.S., with many unaware of the condition due to misleading information and the media. CHADD and the ADHD awareness coalition are working to educate people about ADHD, its real nature, treatability, and treatment options. Primary school teachers should be educated on ADHD to detect symptoms earlier and treat students better. ADHD affects academic performance, behavior, personality, and body image, potentially leading to anti-social personality in the future.

STATEMENT OF THE PROBLEM:

A pre-experimental study to assess the effectiveness of a planned teaching program on knowledge regarding attention deficit hyperactivity disorder among primary school teachers in a selected school in Moradabad, U.P.

AIM:

The aim of this study is to provide appropriate knowledge to primary school teachers regarding attention deficit hyperactivity disorder (ADHD) in children for early detection and to prevent anti-social personality in adulthood.

OBJECTIVES:

- To assess the existing knowledge about attention deficit hyperactivity disorder among teachers of selected school.
- To determine the effectiveness of the planned teaching program among selected school teachers regarding the knowledge about ADHD in children.
- To find out the association between post-test knowledge scores and their selected demographic variables.

HYPOTHESIS:

- **H1** - There would be significant differences between pre-test and post-test knowledge scores regarding ADHD in teachers of the selected school.
- **H2** - There would be a significant association between knowledge scores of primary school teachers and their demographic variables.

ASSUMPTIONS:

Planned teaching programs regarding ADHD can improve the knowledge of primary school teachers.

DELIMITATION:

- The study is limited to the planned teaching program covering only the teachers of the selected primary school.
- The availability of the teachers.

VARIABLES UNDER STUDY:

Dependent Variable: Knowledge of Primary School Teachers Regarding ADHD.

INDEPENDENT VARIABLES: ADHD-related teaching program planned.

DEMOGRAPHIC VARIABLES: In this study, demographic variables are used such as age, gender, professional education, teaching experience, education status, etc.

REVIEW OF LITERATURE:

A review of literature related to the present study is organized under the following headlines:

- Review of literature related to knowledge of attention deficit/hyperactivity disorder (ADHD).
- Review of literature related to the incidence rate of ADHD.
- Review of literature related to the effectiveness of a planned teaching program for attention deficit/hyperactivity disorder (ADHD).

METHODOLOGY:

Research approach:

A quantitative research approach was used for the study. The goal of the study is to determine how much primary school instructors at a few schools in Moradabad, Uttar Pradesh, know about attention deficit hyperactivity disorder. The research is part of the study to explore and assess the level of a pre-experimental study to assess the effectiveness of a planned teaching program regarding ADHD in primary school teachers.

Research design:

The investigator has employed a pre-experimental design called a survey. The design used in a pre-experimental study, where the aim of the research is to generate new facts, is largely pre-experimental. It is especially suited to such studies since description implies natural observation of the characteristics of the research subject and deliberate manipulation of the variables or control over

the research setting. The study has analyzed the level of a pre-experimental study to assess the effectiveness of a planned teaching program regarding ADHD in primary school teachers.

Research Variables:

Dependent variables: The response, behavior, or outcome that is predicted or explained in the research. Changes in the dependent variable are presumed to be caused by independent variables. In this study, the dependent variable is the level of knowledge regarding ADHD.

Independent variables: The independent variable is the variable that stands alone and is not dependent on any other. It is the cause of action. In this study, the planned health education program is the independent variable.

Demographic variables: In this study, we selected school in Moradabad, U.P., for data collection. Our demographic variables include age, gender, educational status, teaching experience, and professional education.

Setting of the Study:

The study was conducted at selected school in Moradabad, Uttar Pradesh (U.P.).

Rationale for Selecting this Setting:

The rationale for selecting this setting for the study was based on the researcher's familiarity with the setting, convenience, expected cooperation from the authorities in obtaining permission, understandable language, and considerations of time and economics.

Population:

In the present study, the population comprised school teachers in the age group of 21–70 years from selected school in Moradabad, Uttar Pradesh (U.P.).

Sample:

The sample in the present study consisted of 30 school teachers in the age group of 21–70 years from a selected school.

Sample Size:

The sample size in the present study was 30 school teachers in the age group of 21–70 years from a selected school.

Sampling Technique:

A non-probability convenient sampling technique was used in this study.

Sampling criteria:

Inclusion criteria:

- Teachers working in selected school at Moradabad.
- Adult aged between 21 to 70 years.
- Willing to participate in the study.
- Ability to read, write, and understand English or Hindi language.

Exclusion criteria:

- School teachers below 21 years of age.
- School teachers above 70 years of age.
- Not willing to participate in the study.
- Unavailable during data collection.

Development of Tools:

The tool was constructed to assess knowledge regarding attention deficit hyperactivity disorder. An extensive literature review, including books, journals, internet sources, expert opinions, and the investigator's professional experience, was conducted to develop the structured tool.

Description of the Tool:

The tool used for the study is the questionnaire method.

A questionnaire method was used to assess the knowledge of attention deficit hyperactivity disorder among primary school teachers in selected school in Moradabad, Uttar Pradesh (U.P.).

There are two portions in the tool: A and B

Section A: This section consists of items pertaining to demographic variables of primary school teachers with attention deficit hyperactivity disorder, including age, occupation, monthly income, religion, family type, and number of teachers.

Section B: This section consists of a structured questionnaire to assess the level of knowledge regarding attention deficit hyperactivity disorder among primary school teachers in selected school in Moradabad. The total number of questions is 30, and they are related to knowledge of attention deficit hyperactivity disorder.

Scoring Procedure:

For convenience, the level of knowledge of primary school teachers regarding attention deficit hyperactivity disorder was divided into three categories: adequate, moderate, and inadequate. Scoring (correct answer 1 and wrong answer 0 marks) was allotted.

Level of knowledge	Score
Adequate	21-30
Moderate	11-20
Inadequate	Less than 10

Table 1: level of knowledge scoring regarding attention deficit hyperactive disorder among primary school teachers.

Maximum score: 30

Minimum score: 0

Criteria Measures: All the items of the tool were analyzed using descriptive statistics (frequency distribution, percentage distribution, and graphs) and inferential statistics (Chi-square).

Content Validity: The content validity of the knowledge questionnaires was determined by experts' opinions. The experts were requested to provide valuable suggestions to develop a more relevant tool for the study. Changes were incorporated based on their suggestions.

Ethical Consideration: To conduct the research study in selected school in Moradabad, U.P., written permission was obtained from the selected school principal in Moradabad. Confidentiality was assured to all the subjects to gain their formal cooperation. An informal consent form was taken from all the participants.

Reliability of the Tool: The reliability of measuring instruments is a major criterion for assessing quality and adequacy. The reliability of instruments refers to the degree of consistency with which they measure the attributes they are designed to measure.

Data Collection: Pretest and posttest questionnaires were administered to the participants. The pretest assessed their baseline knowledge of ADHD, while the posttest evaluated the effectiveness of the intervention in enhancing their understanding of the disorder.

Plan for Data Analysis: It was decided to analyze the data using both descriptive and inferential statistics based on the objectives and hypotheses of the study. A master data sheet was prepared by the investigator for data analysis. The data will be analyzed in terms of descriptive statistics (mean, percentage, standard deviation) and inferential statistics (i.e., Chi-square).

Descriptive: Frequency, percentage, and means were used for the data analysis of knowledge assessment.

Inferential: The "Chi-square" test was used to determine the association between demographic variables and knowledge scores.

Intervention: The planned teaching program comprised interactive workshops, presentations, and handouts conducted over a fourteen-day period. The sessions covered various aspects of ADHD, including its symptoms, etiology, diagnostic criteria, comorbidities, and evidence-based classroom management strategies.

Results

This chapter deals with the analysis and interpretation of data obtained from 30 participants levels of knowledge regarding attention deficit hyperactivity disorder among the primary school teachers in selected school in Moradabad, U.P. In order to find a meaningful answer to the research problem, the data was processed and analyzed on the basis of objective

THE DATA IS COLLECTED UNDER FOLLOWING SECTIONS:

SECTION A: -

- Percentage wise distribution of demographic characteristics of samples.

SECTION B: -

- Effectiveness of planned teaching program regarding attention deficit hyper activity disorder among primary school teachers.
- Comparison of pre-test and post-test knowledge regarding ADHD among primary school teachers in selected school in Moradabad, U.P
- Association between pre-test level of knowledge score regarding attention deficit hyper activity disorder with their selected demographic variables.

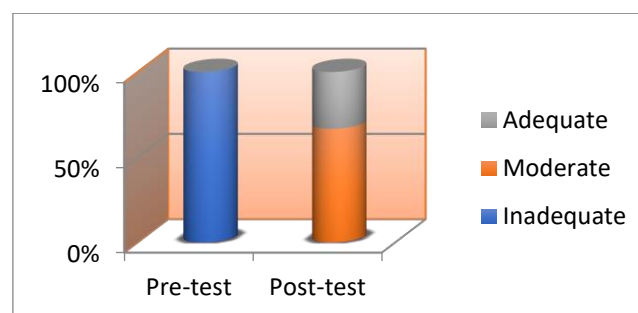


Figure 1: The percentage distribution is determined according to the effectiveness of the planned teaching program by comparing the pre-test and post-test levels of knowledge scores.

Figure 1 shows the percentage-wise distribution of the effectiveness of the planned teaching program by comparing the pre-test (Inadequate 100%, Moderate 0%, and Adequate 0%) and post-test (Inadequate 0%, Moderate 66.66%, and Adequate 33.33%) levels of knowledge score.

Table 2: Comparison of pre-test and post-test knowledge regarding ADHD among primary school teachers in selected school in Moradabad, U.P

N=30

S. No.	Level of knowledge	Mean	Mean %	SD	CV	TV	t-test	DF	Level of significant
1.	Pre-test	4.66	4.66%	1.46	0.32	2.05	0.32	29	#
2.	Post-test	18.56	18.56%	3.42					

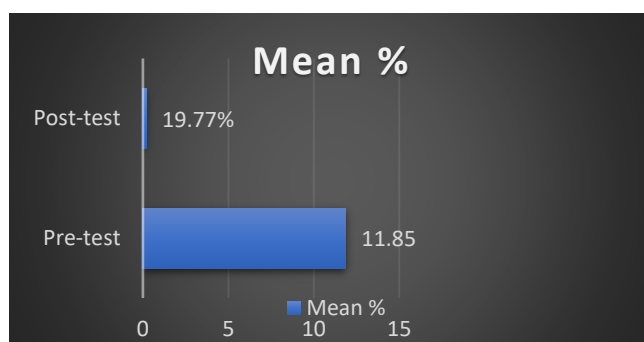


Figure 2: Comparison of pre-test and post-test knowledge regarding ADHD among primary school teachers in selected school in Moradabad, U.P.

Figure 2 shows that the mean pre-test knowledge score was 4.66 and the mean post-test knowledge score was 18.56. The difference between the pre- and post-test knowledge scores was statistically significant.

Hence, it was inferred that there was an increase in knowledge after the planned teaching program regarding attention deficit hyperactivity disorder among primary school teachers. So, the research hypothesis was accepted.

Table 3: Association between pre-test level knowledge and demographic variables among primary school teachers regarding attention deficit hyperactivity disorder

N=30

S. No.	Demographic Variable	Inadequate		Moderate		Adequate		DF	CV	TB	Level of significant
		F	%	F	%	F	%				
1	Age (in years)							6	1.51	12.59	#
	- 22-25	0	-	12	40	4	13.33				
	- 26-29	0	-	04	13.3	2	6.6				
	- 30-33	0	-	02	6.6	2	6.6				
- >33	0	-	02	6.6	2	6.6					
2.	Gender							2	22.5	5.99	*
	- Male	0	-	2	6.6	0	0				
- Female	0	-	18	60	10	33.3					
3.	Education Status							6	1.17	12.59	#
	- B.Sc.	0	-	3	10	2	6.6				
	- B.A.	0	-	8	26.6	2	6.6				
	- M.A.	0	-	9	30	6	20				
- M.Sc.	0	-	0	-	0	-					
4.	Teaching Experience							6	1.03	12.59	#
	- 1-2 years	0	-	12	40	4	13.3				
	- 2-3 years	0	-	4	13.3	3	10				
	- 3-4 years	0	-	0	-	0	-				
- 4-5 years	0	-	4	13.3	3	10					
5.	Professional Educations							6	2.87	12.59	#
	- TET	0	-	1	3.33	0	-				
- B. ED.	0	-	7	23.33	5	16.6					

- NTT	0	-	7	23.33	1	3.3			
- DL. ED	0	-	5	16.66	4	13.3			

Shows the chi square value of Primary school teachers regarded as having attention deficit hyperactivity disorder in relation to demographic variables.

Not significant at $p > 0.05$ level

* Significant at the $p < 0.05$ level

The obtained Chi square value for age of 1.15 is less than the table value, which indicates that there is no significant association between levels of knowledge and selected demographic variables; hence, the researchable hypothesis is not accepted.

The obtained Chi square value of 'Gender' (22.5) is higher than the table value, which indicated that there is a significant association between level of knowledge and the selected demographic variable, hence the researchable hypothesis is acceptable.

The obtained Chi square value for educational status of 1.17 is less than the table value, which indicates that there is no significant association between levels of knowledge and selected demographic variables; hence, the researchable hypothesis is not accepted.

The obtained Chi square value for teaching experience of 1.03 is less than the table value, which indicates that there is no significant association between levels of knowledge and selected demographic variables; hence, the researchable hypothesis is not accepted.

The obtained Chi square value for professional Education' (2.87) is less than the table value, which indicates that there is no significant association between levels of knowledge and selected demographic variables; hence, the researchable hypothesis is not accepted.

Nursing implication

The result of the study proves that the school teachers of selected school in Moradabad had a significant increase in their knowledge regarding attention deficit hyperactivity disorder.

The findings of the study have several implications for the following fields:

Selected primary school in Moradabad

- General educational and knowledge status of school teachers in selected school
- Selected primary schools in Moradabad
- Primary schools are the first step in providing education, which gives the basic knowledge and forms the base of knowledge in the younger ones.
- They are responsible for the future development of the children.
- As the risk age group for this disorder is between 3 and 12 years old,
- General educational and knowledge status of school teachers at selected schools
- It is a mental disorder that is mostly seen in young children, like dyslexia. The schools provide only a basic education.
- The teachers are not so familiar with this kind of condition, so if any child is found to have any misbehaviour, they punish them, which is not right.
- Providing information about the disorder helps teachers as well as students to manage such a case effectively if it is found near them.

Recommendation

- Based on the findings of the study, the following recommendation has been made for further research:
- A large-scale study can be conducted on a large sample to generalise the findings.
- The study can be carried out among primary school teachers.
- A comparative study can be conducted among individuals in community settings.
- A descriptive study can also be conducted regarding the same.
- The study can be done by the teachers in the general education system to prevent misbehaviour with the young ones in school settings as well as at home.

Limitation

The study is limited to:

- Primary school teachers don't have any previous knowledge about attention deficit hyperactivity disorder.
- School teachers are not easily available during school hours.
- The sample size is limited. 30
- Schools are limited to selected
- The prescribed data collection period is only 3–4 days.
- Teachers who are willing to attend the planned teaching program
- The result cannot be generalised due to individual differences.

Conclusion:

From the results of this study, it is evident that the pre-experimental planned teaching program effectively enhanced primary school teachers' knowledge and awareness of ADHD in selected school in Moradabad, U.P. The intervention led to significant improvements in understanding ADHD symptoms, their impact on learning, and effective classroom management strategies. These findings emphasize the importance of targeted teacher training programs in addressing neurodevelopmental disorders like ADHD and fostering inclusive educational environments. To fully comprehend the intervention's long-term impact and its adaptability to

diverse educational settings, further research is recommended. Overall, this study's outcomes demonstrate the positive influence of the planned teaching program on teachers' knowledge about ADHD, potentially leading to improved educational experiences for students with ADHD and more inclusive learning environments.

Based on the findings of the study, the following conclusions were drawn:

- There is a need for knowledge about the prevention of attention deficit hyperactivity disorder. School teachers are the major ones who play a vital role in the prevention of misbehaviour with the affected children as well as providing knowledge to the parents of their wards.
- The planned teaching program significantly increased the knowledge of school teachers regarded as having attention deficit hyperactivity disorder'.
- They used limited coping and treatment methods; they lacked awareness of counselling and guidance services; hence, the utilisation of these services on campus was negligible.
- Thus, the investigator concludes that the planned teaching program was helpful in increasing the knowledge of school teachers in selected school in Moradabad regarding attention deficit hyperactivity disorder.

Acknowledgements

Authors wish to extend sincere gratitude to all the school teachers in selected school, Moradabad, U.P. for active participation in our study.

Funding

The research, writing, and/or publishing of this paper were all done without any financial assistance from the author.

Conflicts of Interest

Regarding the publishing of this work, the authors state that they have no conflicts of interest.

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