

“Effectiveness Of Informational Booklet On Knowledge Regarding Autism Spectrum Disorders Among Primary School Teachers”

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ABSTRACT: Autism spectrum disease is a pervasive developmental disorder characterized by abnormal or impaired development that is evident before the age of three years. It affects social interaction, communication, and behavior, with a severity that ranges from mild to severe, hence the term Autism Spectrum Disorder. This study aims to evaluate the effectiveness of informational booklet designed to enhance preschool teachers' understanding of ASD. The research design selected for the study was pre experimental one group pre test post- test design. Sample comprised of 100 primary school teachers of selected schools of Indore, (M.P.) selected using non probability purposive sampling technique. Structured Knowledge Questionnaire was used to assess the knowledge. The mean of post-test knowledge scores was 26.6, which is significantly higher than mean of pre-test knowledge scores of 12.4. Standard deviation of post-test score and pre-test score is 9.4 and 13.3 respectively. The computed paired “t” value (18.67, df=99 at the level of p= 0.05) is greater than table value (1.66) which represents significant gain in knowledge. This study result implies that informational booklet was useful in improving the knowledge of primary school teachers regarding autism spectrum disease.

keywords: Autism Spectrum disease, primary school teachers

INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex developmental condition that typically becomes apparent before the age of three, though it can manifest earlier. Although many children with autism appear physically typical, their social, communicative, and behavioral traits often differ significantly from those of their peers. ASD is characterized by persistent deficits in social communication and interaction, along with restricted and repetitive behaviors or interests. The severity of these traits varies, ranging from mild to severe, which is why the term "spectrum" is used.

ASD includes a variety of conditions, with Classic Autism on one end of the spectrum and Asperger Syndrome on the other. On December 18, 2007, the United Nations General Assembly declared April 2nd as World Autism Awareness Day to raise awareness and promote understanding of this condition. The prevalence of ASD has risen globally, with approximately 1 in 54 children in the United States diagnosed with the disorder, as reported by the Centers for Disease Control and Prevention (CDC) in 2020. Early diagnosis and intervention, particularly during the critical early childhood years, are vital to helping children with ASD reach their full potential.

Preschool teachers play a key role in early childhood education, and it is essential that they are equipped with the knowledge and strategies to support children with ASD effectively. Since ASD is typically diagnosed before the age of three, early detection is crucial for intervention. Studies indicate that approximately 70% of individuals with ASD also have

intellectual disabilities, making co-occurring conditions, such as intellectual disabilities, a common concern.

Globally, the prevalence of ASD is estimated at 1% of the population, with a higher occurrence in males than in females. The condition transcends socioeconomic, racial, and parenting boundaries. In the United States, the rate of ASD diagnosis has risen significantly, from 1 in 150 children in 2000 to 1 in 59 in 2014, reflecting both improved awareness and diagnostic practices. In India, it is estimated that around 10 million people live with autism, and prevalence is increasing.

The rising prevalence of ASD presents challenges for families, individuals, and educators. Teachers must be well-informed about ASD to provide appropriate support within the classroom. Educators who lack understanding may misinterpret the behavior of children with ASD, leading to mistreatment and diminishing the child's confidence. Additionally, there may be missed opportunities to identify and nurture a child's strengths in other areas.

A study by Baio et al. (2018) aimed to estimate the prevalence of Autism Spectrum Disorder among children in the United States. The results indicated a prevalence of 1 in 59 (16.8 per 1,000) among 8-year-olds in 2014, reflecting a continued increase from previous years. The authors concluded that the rising prevalence necessitates ongoing surveillance and research into the causes and interventions for ASD. Given its complex nature, ASD poses challenges for individuals, families, and educators, highlighting the critical role of teachers in supporting students with ASD within educational settings. Enhancing teachers' knowledge and understanding of ASD

through targeted educational interventions, such as informational booklets, is crucial for improving educational outcomes and fostering inclusive classroom environments. This study aims to evaluate the effectiveness of educational interventions designed to enhance preschool teachers' understanding of ASD. By providing teachers with tools and knowledge, such interventions aim to improve their ability to identify and support children with ASD, fostering a more inclusive educational environment.

PROBLEM STATEMENT

A study to assess the effectiveness of informational booklet on knowledge regarding autism spectrum disorders among primary school teachers in selected schools of Indore (M.P.).

OBJECTIVES OF THE STUDY

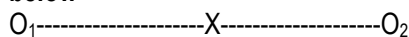
1. To assess the pretest knowledge regarding autism spectrum disorders among primary school teachers.

RESEARCH METHODOLOGY

RESEARCH APPROACH: The approach used in the present study was quantitative approach. Quantitative approach most often uses deductive logic, in which researcher start with hypothesis and then collects data which can be used to determine whether empirical evidence to support that hypothesis exists.

RESEARCH DESIGN: The research design selected for the study was pre experimental one group pre test post- test design. It judges the effectiveness of the informational booklet by the difference of primary school teacher's pre and post test knowledge score regarding learning disabilities in children.

Diagrammatic representation of the design is given below



- O₁ : Pre Test
- X : Intervention
- O₂ : Post Test

SAMPLE & SAMPLING TECHNIQUE: Sample comprised of 100 primary school teachers of selected schools of Indore, (M.P.) Non probability purposive sampling technique was used.

CRITERIA FOR THE SELECTION OF THE SAMPLES

Inclusion criteria

- **Section B (Structured Knowledge Questionnaire)-**

Consists of 40 questions related to meaning, incidences, causes clinical features, diagnosis and management of a child with learning disability. Each question has one correct answer that carries one mark and wrong answer carries 0 marks. The maximum total score of the knowledge questionnaire was

Table: 1 Score was graded as follows:

2. To assess the posttest knowledge regarding autism spectrum disorders among primary school teachers.
3. To assess the effectiveness of informational booklet on knowledge regarding autism spectrum disorders among primary school teachers.
4. To find an association between pre-test knowledge with selected socio-demographic variables.

HYPOTHESIS

RH₁ – There will be significant difference between pre-test and post-test knowledge score regarding autism spectrum disorders among primary school teachers among at the level of p≤0.05

RH₂ – There will be a significant association of pre-test knowledge score with selected socio-demographical variables at the level of p≤0.05.

- Teachers who are having more than 1 year experience.
- Teachers teaching in elementary/primary classes from 1st to 5th standard.
- Primary school teachers who are willing to participate in the study.
- Primary school teachers who can read and write Hindi and English.

Exclusion criteria

- Teachers who are having less than 1 year experience.
- Teachers teaching in other than elementary/primary classes.
- Primary school teachers who are not willing to participate.

DESCRIPTION OF TOOL

- **Section A (Socio- Demographic variable)-** Demographic data consists of 8 items seeking information about age, gender, marital status, educational qualification, years of experience, child psychology in the curriculum, previous knowledge and experience in teaching children with Autism Spectrum disorders.



SCORE	REMARK
0-10	Poor
11-20	Average
21-30	Good
31-40	Excellent

VALIDATION AND RELIABILITY OF THE TOOL: The tool was submitted to 7 experts from the field of child health nursing along with the blue print criteria checklist, answer key, module to establish the content validity. The reliability was calculated using test retest method. The tool was found reliable $r = 0.82$ using Karl Pearson formula. The tool found to be clear and understandable..

DATA COLLECTION PROCEDURE: The investigator obtained written permission from the concerned authority prior to the data collection at the schools. Pre test knowledge was assessed using structured knowledge questionnaire to assess the existing knowledge of primary school teachers on the first day. On the same day informational booklet was distributed among the samples and instruction to use informational booklet was explained and the date for the post test was priorly informed to them. Post test assessment was done using the same questionnaire among the primary school teachers after 5 days..

RESULT AND INTERPRETATION:

Table No. 2 Frequency and percentage distribution of primary school teachers according to their demographic variable N=100

S.NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE%	
1.	Age	21-25 yrs	15	15%
		26-30 yrs	20	20%
		31-35 yrs	45	45%
		>35 yrs	20	20%
2.	Gender	Male	10	10%
		Female	90	90%
3.	Educational qualification	Teacher training	48	48%
		B.Ed	32	32%
		M.Ed	20	20%
4.	Years of experience	1-5 yrs	17	17%
		5-10 yrs	44	44%
		>10 yrs	39	39%
5.	Marital status	Married	83	83%
		Unmarried	17	17%
6.	Child Psychology in curriculum	Yes	51	51%
		No	49	49%
7.	Attended in service education	Yes	22	22%
		No	78	78%
8.	Experience in Teaching children with Autism spectrum disorders	Yes	44	44%
		No	56	56%

- In age of primary teachers 20% of samples are in the age group of 26-35 years and 45% in 31-35 years, 15% are in the age group of 21-25 years and 20% above 35 years,

- In gender of teachers, 10 % was male teachers, 90% was the female teachers.
- In educational qualification of the primary school teachers, in 48 teachers had teachers training certificate, 32% of Teachers had B.Ed., 20 % had M.Ed.,
- In experience of teachers, 17% of the teachers have 1-5 years, 44% of the teachers have 5-10 years of experience and 39% of the teachers have above 10 years of experience,
- The above figure shows majority of school teachers are married 83 % & 17% are unmarried.
- The above figures show child psychology in curriculum results that 51% had child psychology in curriculum and remaining 49% teachers not had child psychology in curriculum.
- In attended in service education 22 % of teachers attended in service education and 78% of teachers not attended in service education.
- The above figure shows experience in teaching children with autism spectrum disorders is 56% had experience, 44% had no experience.

COMPARISON OF PRE TEST AND POST TEST LEVEL OF KNOWLEDGE OF PRIMARY SCHOOL TEACHERS

Table No. 3 Comparison of Pre-Test and Post-Test Knowledge Score

Level of knowledge	Pre test		Post test	
	Frequency	Percentage %	Frequency	Percentage %
POOR (0-10)	52	52	0	0
AVERAGE (11-20)	27	27	14	14
GOOD (21-30)	16	16	56	56
EXCELLENT (31-40)	5	5	30	30
TOTAL	100	100	100	100

The majority of primary school teacher's pre test knowledge scores were poor 52%, 27% were having Average, 16% were having Good and only 5% were having Excellent knowledge score. Whereas post-test knowledge score 56% were having good, 30% were having Excellent, 14% were having Average and none of the teachers had poor knowledge.

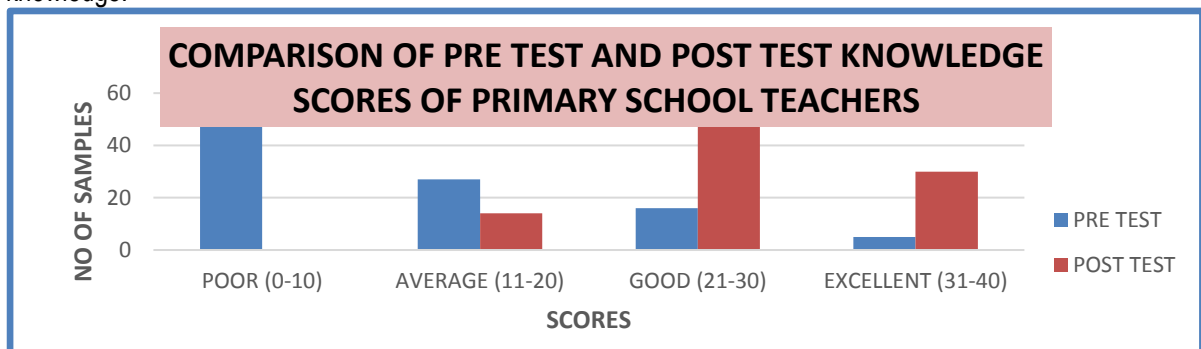


FIG NO.1. BAR CHART REPRESENTING THE COMPARISON OF PRE TEST AND POST TEST KNOWLEDGE SCORE OF TEACHER

EFFECTIVENESS OF THE INFORMATIONAL BOOKLET ON KNOWLEDGE OF PRIMARY SCHOOL TEACHERS REGARDING AUTISM SPECTRUM DISORDERS

Table No.4 Effectiveness of informational booklet on knowledge of primary school teachers regarding autism spectrum disorders
N=100

Test	Mean	Standard deviation	"t" value
Pre test	12.4	9.4	"t" _{cal} =18.67 df=99 "t" _{tab} =1.66 p=0.05 HS
Post test	26.6	13.3	

HS* highly significant, df –degree of freedom

The mean of post-test knowledge scores was 26.6, which is significantly higher than mean of pre-test knowledge scores of 12.4. Standard deviation of post-test score and pre-test score is 9.4 and 13.3 respectively. The computed paired "t" value (18.67, df=99 at the level of p= 0.05) is greater than table value (1.66) which represents significant gain in knowledge. Hence the hypothesis H_{1is} is accepted.

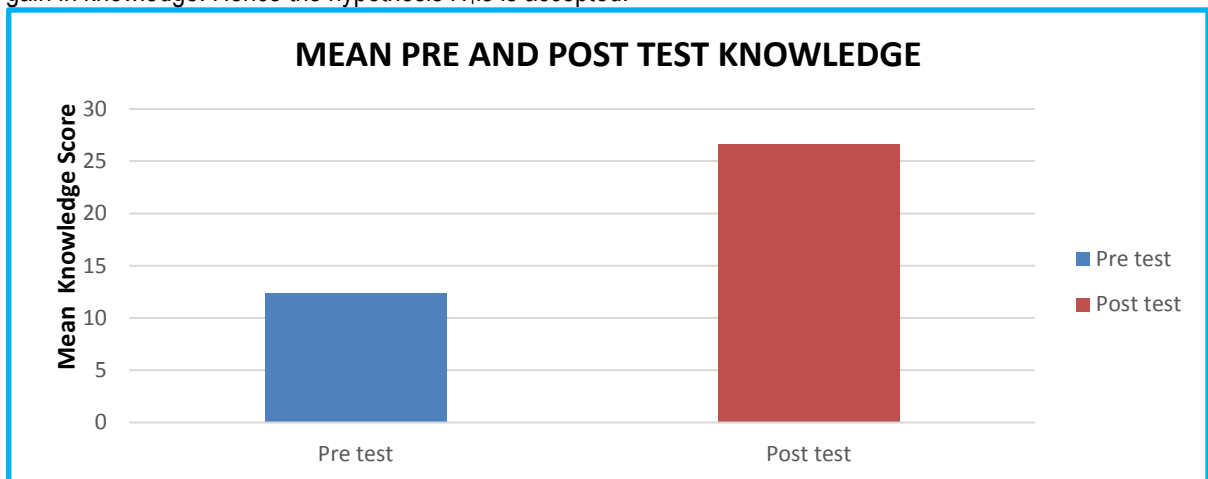


FIG NO.2.BAR CHART REPRESENTING THE COMPARISON OF MEAN PRE TEST AND POST TEST KNOWLEDGE SCORE OF TEACHERS.

ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORES WITH THEIR SELECTED SOCIO-DEMOGRAPHIC VARIABLES.

Table No.5 Association between demographic variables and pre test level of knowledge
(N=100)

Particular	Pre-Test Score				DF	χ ² value
	Poor	Average	Good	Excellent		
Age of teachers						
21-25 yrs	5	5	3	2	09	10.46 Insignificant (p=0.05)
26-30 yrs	8	7	3	2		
31-35 yrs	29	8	7	1		
>35 yrs	10	7	3	0		

Gender						
Male	3	3	4	0	03	5.62 Insignificant (p=0.05)
Female	49	24	12	5		
Educational Qualification						
Teacher training	45	2	1	0	06	78.4 Significant (p=0.05*)
B.Ed	7	18	5	2		
M.Ed	0	7	10	3		
Years of experience						
1-5 yrs	7	8	2	0	06	17.7 Significant (p=0.05*)
5-10 yrs	32	5	5	2		
>10 yrs	13	14	9	3		
Marital Status						
Married	46	21	12	4	03	2.3 Insignificant (p=0.05)
Unmarried	6	6	4	1		
Child psychology in syllabus						
Yes	10	22	14	5	03	44.2 Significant (p=0.05*)
No	42	5	2	0		
Attended in service education						
Yes	11	3	4	4	03	11.7 Significant (p=0.05*)
No	41	24	12	1		
Experience in teaching children with Autism Spectrum disorders						
Yes	19	11	11	3	03	5.8 Insignificant (p=0.05)
No	33	16	5	2		

χ^2 =chi-square

*= Significant

The association of pre-test knowledge score with their selected demographic variables by using chi-square (χ^2), it was evident that there was significant association between pre-test knowledge score with selected socio demographic variable. Thus hypothesis H_{2is} is accepted.

CONCLUSION

The mean of post-test knowledge scores among primary school teachers was 26.6, which is significantly higher than mean of pre-test knowledge scores of 12.4. Standard deviation of post-test score and pre-test score is 13.3 and 9.4 respectively. The computed paired “t” value (18.67, df=99, at the level of $p= 0.001$) is greater than table value (1.66) which represents significant gain of knowledge. Thus the “ RH_1 ”: There will be significant difference between pre test knowledge and post test knowledge score regarding Autism spectrum disorders among primary school teachers at the level of $p\leq 0.05$ is accepted.

It is evident from the results that RH_2 : There will be significant association between the pre test knowledge score and selected demographic variables at the level of $p\leq 0.05$. is accepted as there is significant association between pretest knowledge score and selected demographic variables like educational qualification, years of experience, child psychology in syllabus and attended in-service education.

From the above results, we can conclude that there was statistically significant gain in knowledge among primary school teachers regarding autism spectrum disorders. Thus, the intervention “informational booklet” was effective.

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