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Original Research Article

A study to assess the effectiveness of self-instructional module on knowledge regarding learning disabilities in children among primary school teachers

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ABSTRACT

Background and Aims: Learning disability (SLD) comprises a heterogeneous group of disorders with the main impairment being cognitive processing manifested by significant difficulties in the acquisition and use of skills such as listening, speaking, reading, reasoning, writing or mathematical skill. This leads to challenges in academic performance and has psychosocial implications. Trained teachers who have positive attitude and practical knowledge concerning individual needs (physical, emotional and intellectual) and problems can prevent and manage emotional and psychosocial problems of young children. In India the prevalence of specific learning disability in India ranges from 5%–15% in various studies. Identification of disorder prior to school age is difficult due to the instability of results obtained from formal testing procedures. Teachers are the first person to notice that the child is not learning as expected.

Materials and Methods: The research design adopted for this study was pre experimental one group pre testpost test research design and research approach adopted for this was to qualitative approach. The sample was 100 primary school teachers. Non probability purposive sampling technique was used. Data was collected by using structured knowledge questionnaire consisting of two sections, Section I – Socio-Demographic variables & Section II – Structured knowledge Questionnaire.

Result: 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 RH₁ is accepted. It is evident from the results that RH₂: There will be significant association between the pretest knowledge score and selected demographic variables at the level of P ≤ 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.

Interpretation and Conclusion: The study revealed that the level of knowledge regarding learning disability was low among school teachers in pretest and there was significant gain in knowledge in post test. Thus the study results revealed that self-instructional module is an effective instructional method to improve the knowledge level of primary school teachers regarding learning disabilities.

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1. Introduction

Apart from home, school is the single most important place in the life of most children. Their experience of school

will play a vital part in their life and will determine their academic, social and, probably, their occupational future.¹

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Guru Brahma, Guru Vishnu, Guru Devo Maheswarah
Guru Sakshath Para Brahma, Tasmai Sree Guruve Namaha

The Hindu philosophy places teacher on a pedestal – even above God and just after the parents. Children spend most part of their working hours in school with teachers who play an important role in molding their future. A teacher is responsible to integrate all round development of a child. Like a gardener, they provide all suitable conditions for student's best growth.²

Families lay the foundations for a feeling of security. At its best, the family is the base from which the child learns to face and cope with the anxieties of life. Apart from home, school is the single most important place in the lives of most children. Their experience of school will play a vital part in their lives and will determine their academic, social and, probably, their occupational future.³

The growth in the number of children with disabilities exceeds the growth in both the resident population and the school enrollment. But, according to Prasad M, the Mental Health Services available to provide psychological care to emotionally disabled children in India is very meager. WHO insisted on the fact that, mental health program should utilize trained teachers to improve the psychosocial aspect of the school children. A mental Health input in the School Health Program is likely to play a major role in the amelioration of social, behavioral and learning problems in school children. Research studies supported the use of teacher ratings for initial screening and identification of students at high risk for social-behavioral problems.⁴⁻⁶ As a method of management teacher must assess their ability, interest, creativity and commitment to the specific field areas of the human endeavor. This process utilizes the teacher's knowledge of the child through observations of student behaviors within the learning environment. While dealing with underachievers, this knowledge will help in differentiating children, who are lazy and will not do the work or teach disabled who cannot do the work.⁷

Lack of awareness among parents and school teachers continues to pose a significant issue. The children with learning disability have trouble with expressing their feelings, calming themselves down. These children are at risk of developing low self-esteem and also have very fewer friends and they are one and half times more likely to drop out of schools. So, they need to be identified at the earlier stage and proper guidance and training should be provided to them. With large numbers of students identified with learning disabilities in schools across India, it is only appropriate to determine if teachers are adequately prepared to make learning and performance effective and efficient for this special population of students. Teachers need to have adequate knowledge of the cognitive, linguistic, neuropsychological, behavioral, and social characteristics associated with learning disabilities, so that they are able to design instructional models that work for these students. Knowledge of learning disorder among teachers is also needed for another reason, in order for professionals to

avoid stereotypical descriptions of individuals with learning disorder, Because the success of inclusive classrooms is related to teachers' knowledge of the unique needs of their students.⁵⁻⁸

Investigator during school health programs noticed that all the students were forced to follow the same syllabus irrespective of their difference in the capacity to learn. Students who were weak in their scholastic behind their poor performance. Without knowing that poor performance can be a brain disorder, teachers were ill- treating them, which in turn further reduced their confidence. Similarly, no attempt was made to identify and foster their capabilities in other fields. Hence, researcher felt that it is important to understand the knowledge and attitude of teachers towards the child's disabilities. Moreover, related studies were found to be very few in Indian setting. This observation inspired the researcher to conduct a study to assess the effectiveness of Self-Instructional Module [SIM] on knowledge regarding selected learning disabilities in primary school children among primary school teachers in selected schools of Indore (M.P.).

2. Problem Statement

“A study to assess the effectiveness of Self-Instructional Module on knowledge regarding learning disabilities in children among primary school teachers in selected schools of Indore (M.P).”

3. Objectives

3.1. Objectives of study

1. To assess the pretest knowledge regarding learning disabilities in children among primary school teachers.
2. To assess the posttest knowledge regarding learning disabilities in children among primary school teachers.
3. To assess the effectiveness of self-instructional module on knowledge regarding learning disabilities in children among primary school teachers.
4. To find an association between pre-test knowledge with selected socio-demographic variables.

3.2. Hypothesis

1. RH₁ – There will be significant difference between pre-test and post-test knowledge score regarding learning disabilities in children among primary school teacher at the level of $P \leq 0.05$
2. RH₂ – There will be a significant association of pre-test knowledge score with selected socio-demographical variables at the level of $P \leq 0.05$.

3.3. Study design

Pre experimental one group pre test post- test design

3.4. Sample and setting

In the present study the sample comprised of 100 primary school teachers of Kamala Nehru Higher Secondary School, Gurukul Higher Secondary School, Indore (M.P.).^{9–16}

3.5. Inclusion criteria and exclusion criteria

3.5.1. Inclusion criteria

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

3.5.2. Exclusion criteria

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

3.6. Tool and data collection

Tool used in the study is structured knowledge questionnaire. It consisted of two parts:

1. *Section A: Socio-Demographic Data.*
2. *Section B: Structured knowledge questionnaire.*
 - (a) *Section (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 learning disability.
 - (b) *Section (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 mark. The maximum total score of the knowledge questionnaire was.

3.7. Score was graded as follows

Score	Remark
0-10	Poor
11-20	Average
21-30	Good
31-40	Excellent

3.8. Description of self-instructional module

Self-instructional module includes 7 chapters related to introduction, meaning, causes, diagnosis and management of various learning disorders. The learning disorders discussed in the self-instructional module are reading disorder, of written expression, mathematical disorders, autism and attention deficit hyper activity disorder.

3.9. Data collection procedure

The study was conducted at Kamala Nehru Higher Secondary School, Gurukul Higher Secondary School, Indore (M.P.). The investigator introduced himself to the subjects and explains the purpose of the study. Written consent from the subject was taken and they were made assured about the confidentiality of the results. 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 self instructional module was distributed among the samples and instruction to use SIM 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. Duration of the data collection was 6 weeks. The investigator thanked and appreciated all participants for their co-operation.^{9,17–21}

4. Result and Interpretation

The above table Table 4 Shows that the frequency and percentage distribution of parents according to their socio demographic variables.

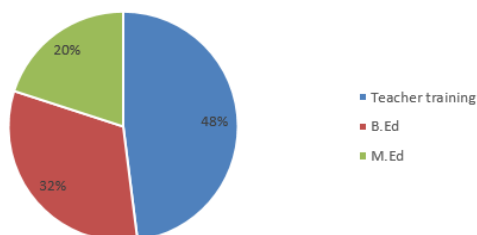
1. In age of primary teachers 20% of samples are in the age group of 26-35 years and 45% in 31-35 years, 15% are in the age group of 21-25 years and 20% above 35 years,
2. In gender of teachers, 10 % was male teachers, 90% was the female teachers
3. In educational qualification of the primary school teachers, in 48 teachers had teachers training certificate, 32% of Teachers had B.Ed., 20 % had M.Ed.,
4. 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,
5. The above figure shows majority of school teachers are married 83 % & 17% are unmarried.
6. 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.
7. In attended in service education 22 % of teachers attended in service education and 78% of teachers not

Table 1: 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%
		26-30 yrs	20%
		31-35 yrs	45%
		>35 yrs	20%
2.	Gender	Male	10%
		Female	90%
3.	Educational qualification	Teacher training	48%
		B.Ed	32%
		M.Ed	20%
4.	Years of experience	1-5 yrs	17%
		5-10 yrs	44%
		>10 yrs	39%
5.	Marital status	Married	83%
		Unmarried	17%
6.	Child Psychology in curriculum	Yes	51%
		No	49%
7.	Attended in service education	Yes	22%
		No	78%
8.	Experience in Teaching children with learning disability	Yes	44%
		No	56%

attended in service education.

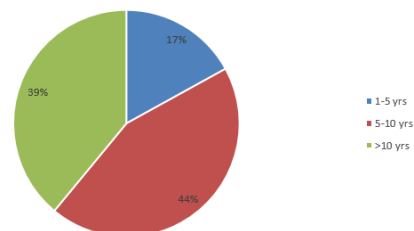
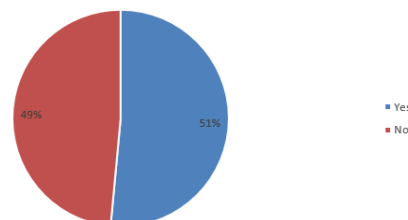
8. The above figure shows experience in teaching children with learning disability is 56% had experience, 44% had no experience.

EDUCATIONAL QUALIFICATION WISE DISTRIBUTION OF TEACHERS**Fig. 1:** Pie diagram representing percentage distribution of educational qualification of teachers

Section II: Comparison of pre test and post test level of knowledge of primary school teachers.

It is observed in Table 2. that 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.

Section III: Effectiveness of the self-instructional module on knowledge of primary school teachers regarding learning disabilities.

EXPERIENCE WISE DISTRIBUTION OF TEACHERS**Fig. 2:** Pie diagram representing distribution of experience of teachers.**CHILD PSYCHOLOGY IN SYLLABUS WISE DISTRIBUTION OF TEACHERS****Fig. 3:** Pie diagram representing percentage distribution of child psychology in syllabus of teachers

Above data Table 2. depicted that 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

Table 2: Comparison of pre-test and post-test knowledge score N=100

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

Table 3: Effectiveness of self Instructional module knowledge of primary school teachers regarding learning disabilities N=100

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

HS* highly significant, df –degree of freedom

Table 4: Association between demographic variables andpre 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 regarding learning disabilities						
Yes	11	3	4	4	03	11.7 Significant (P=0.05*)
No	41	24	12	1		
Experience in teaching children with learning disabilities						
Yes	19	11	11	3	03	5.8 Insignificant (P=0.05)
No	33	16	5	2		

X²=chi-square *= Significant

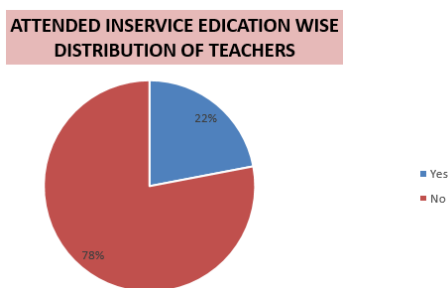


Fig. 4: Pie diagram representing percentage distribution attended in-service education by teachers.

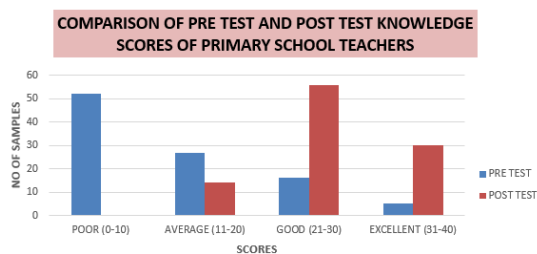


Fig. 5: Bar chart representing the comparison of pre test and post test knowledge score of teachers.

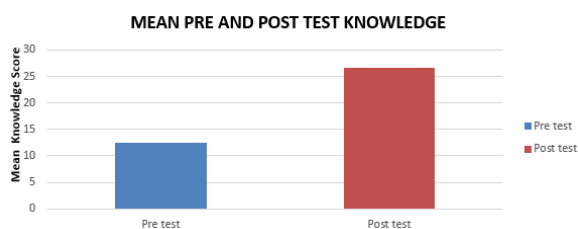


Fig. 6: Bar chart representing the comparison of mean pre test and post test knowledge score of teachers.

at the level of $P=0.05$) is greater than table value (1.66) which represents significant gain in knowledge. Hence the hypothesis H_1 is accepted.

Section IV: Association between pre test knowledge scores with their selected socio-demographic variables.

Association between the pre test knowledge score with the selected demographic variables.

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.

5. Conclusion and Summary

The study revealed that the level of knowledge regarding learning disability was low among school teachers in pre test and there was significant gain in knowledge in post test. Thus the study results revealed that self-instructional module is an effective instructional method to improve the knowledge level of primary school teachers regarding learning disabilities.

6. Source of Funding

None.

7. Conflict of Interest

None.

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