

## ORIGINAL ARTICLE



Converging Healthcare &amp; Technology

## INTERNATIONAL JOURNAL OF CONVERGENCE IN HEALTHCARE

Published by  
IJCIH & Pratyaksh Medicare LLP

www.ijcih.com

# Effectiveness of Simulation Based Teaching Regarding Learning Disabilities of Primary School Children among Primary School Teachers of Selected Schools at Alappuzha District Kerala

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## Abstract

Learning disabilities are a significant concern for primary school children, affecting their academic performance, social interactions, and emotional wellbeing. As there are no specific test to identify children with learning disability, health professionals have to rely mainly on teacher's report for its diagnosis. Previous studies have proved that teacher's towards such children have great influence towards their recovery.

**Objectives:** 1. To design and develop simulation based teaching modules for primary school children with learning disability. 2. To assess the effectiveness of SBT In improving learning outcomes for primary school children with learning difficulties. 3. To identify the challenges and limitations of implementing SBT In primary school settings.

**Methodology: Study design:** Quasi experimental design with pre and post intervention assessments. **Sample;** 60 primary school teachers from 5 different schools.

**Results:** The finding of the experimental group of teachers pre test knowledge and mean score was 16.6 (41.50%) and level of knowledge was inadequate. In post test knowledge score was 33.3 (83.25%). Now the level of knowledge was adequate in experimental group. Similarly in the control group pretest knowledge mean score was 17.2 (43.00%) and post test knowledge mean score was 19.1 (47.75%). In the comparison of experimental group and control group. In the pretest there is no significance difference between the experimental and control group but after self instruction module it is observed significant difference between experimental and control group. Teachers gained knowledge above 41.75% more knowledge on learning disabilities after administration of self instruction module. This 41.75% of knowledge gain is the net benefit of this study which indicates the effectiveness of self instructional module learning disabilities in experimental group than control groups.

**Keywords:** Learning Disability, Knowledge, school teachers, disability children.

## Introduction

According to Mahatma Gandhi, "Education means an all round drawing out of the best in child and men – body,

mind and spirit". Only an efficient and an understanding teacher can identify the capacities, strength and weakness to innate in each student. A teacher is responsible to integrate all round development of a child. Like a gardener, they provide all suitable conditions for students best growth.

Learning disabilities affect significant number of primary school children world wide. Traditional teaching

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methods often struggle to cater the diverse needs of children with learning difficulties. Simulation based teaching has (SBT) has emerged as a promising approach to enhance learning outcomes for children with learning disabilities. This study aims to assess the effectiveness of SBT in improving learning outcomes for primary school children with learning disabilities.

In a country like India where resources are very limited, better and efficient utilization of the available resource is the only solution for the problem. Realization of this reality paved the way for the 9th conference of Central Council of Health and Central Family Welfare Council to declare that "The teachers should be trained for observing and screening students for defects and deviations from normal health to maintain effective surveillance and for providing supportive health education for the prevention of health problems by developing desirable health habits.

### Need for the Study

Children are the Nation's supremely important asset. They determine the future of the nation. Any input into the health of the today's children will be an investment since they are the adults of next decade. According to WHO "Children are a priceless resource and that any nation which neglect them would do so at its peril". WHO day spot light the basic truth that we must all safeguard the healthy minds and bodies of the world's children, as a key factor in attaining Health for all by 2010 AD.

**Philip J**, identified a sheer force of number of children with various developmental disorders. According to him, most development disorders like learning disabilities are "silent handicap" and go unidentified. Such children may not progress in life unless timely remedial help is given.

#### STATEMENT OF THE PROBLEM:

Effectiveness of simulation based teaching regarding learning disabilities of primary school children among primary school teachers of selected schools at Alappuzha district Kerala

#### OBJECTIVES OF THE STUDY:

1. To assess the pretest and post test knowledge of experimental and control group of teachers regarding learning disabilities.
2. To compare the pretest and post test knowledge of experimental and control group of teachers regarding learning disabilities.
3. To compare the posttest knowledge of experimental and control group of teacher regarding learning disabilities.

4. To find out significant association between knowledge of experimental and control group of primary school teachers and selected demographic variables regarding learning disabilities.

#### HYPOTHESIS

**H1** - There is significant difference between the pretest and posttest knowledge of experimental group.

**H2** - There is significant relationship between the pretest and posttest knowledge of control group.

**H3** - There is significant difference between the posttest knowledge of experimental group and control group of primary school teachers.

**H4** - There is significant association between the knowledge of school teachers regarding learning Disabilities and selected demographic variables

#### ASSUMPTION:

1. School teachers possess very limited knowledge on learning disability among children.
2. Simulation based teaching will create awareness regarding learning disabilities among primary school teachers.

#### LIMITATIONS

- The study is limited to 6 weeks period only.
- The study is not generalized since it includes only the primary school children (1 -5th standard)

#### REVIEW OF LITERATURE

**US Department of education** states, in a survey among children enrolled in Public schools identified that approximately 5% of them were affected by learning disability of this reading disability constitute 3-15%. Over 40% of the 4th grade students perform below basic levels on National Assessment of Educational Progress. The study concluded that for about ½ of American children. Learning to read is a much more formidable challenge and for at least 20-30% of these youngsters, reading is one of the most difficult tasks that they will have to master throughout their life.

**Executive Summary of National Research Council** in a study shows that, Learning Disability do not fall evenly across racial and ethnic group-that is in 2001, 1% of white children and 2.6% of non Hispanic black children were receiving Learning Disability related to specific education services. It is also estimated that Dyslexia affect at least 2% of general population and about 70% of those affected are males. But, 60% of them remained undiagnosed.

**Individuals with Disabilities Education Act (IDEA)** served 2817148 students (ages 6-21) with specific learning

disabilities in 1998-99 compared to 2062076 students in 1989-90. This represents a 36.6% increase in cases. The analysis of data found that among learning disabled, school dropouts were 44.9% in women and 57.6% in males.

**Margot P et al (2006)** conducted a longitudinal study with case and control among 300 samples of 11-12 years age children in urban and rural areas of Victoria, Australia. The Child Assessment Schedule Revised is used to assess the behavior and learning disability is assessed with the spelling and arithmetic test from wide range achievement test revised and reading with ACER word knowledge test. The research findings are that spelling difficulties are more common among them than others (32.5% versus 9% on arithmetic and 42% versus 13.5% on spelling) Children with arithmetic difficulties have some what higher rates of behavior disorders than children with spelling disorders (65% versus 48%). Teachers rating indicate that they were performing significantly worse in academic, attitudinal and maturational. Analysis indicated that the Sp+ArD had been the poorest performers in the early school years.

Teachers rated the students with learning disabilities as weak in their strategy use and below average in their performance in all nine domains and organizational domains. These results added to the increasing body of literatures indicating the efficiency of teachers in the accurate identification of cases and learning disabled children's perception as capable and effective.

**National Institute of Child Health and Human Development (2005)** states in a longitudinal interventional study, since, 1985 over 12 years on 34501 children in 11 states in USA and Canada to identify early interventional and remediation measures for children with learning problem. This study explained the significance of teachers in the management of such children.

**Soman SK (2004)** studied the knowledge of teachers regarding the behavioral problems of children. The sample consisted of 45 teachers aged between 25-51 years, from seven schools in Hyderabad, India. Findings indicate that poor scholastic performance, relationship problems, conduct problems and psychosomatic problems were perceived by subject as major behavioral problems. Information regarding treatment facilities was inadequate. This shows that teachers tend to use harmful methods to deal with children's behavioral problems such as minor punishments, moral education and threats of punishments.

## Methodology

**Research Approach:** The research approach used for the study is quasi-experimental in nature.

**Research Design:** Quasi - experimental research design was used for assessing effectiveness of SBT for primary school students (1-5 std) regarding learning disabilities.

**Schematic Representation of the Research Design:** A quasi - experimental design, which include manipulation, control and no randomization.

Grove	Pre-Assessment	International	Post Assessment
Experimental	O <sub>1</sub>	X	O <sub>2</sub>
Control	O <sub>1</sub>	-	O <sub>2</sub>

### Key:

O<sub>1</sub> = Pre-Assessment of knowledge of primary school teachers.

O<sub>2</sub> = Post Assessment of knowledge of primary school teachers.

X - Self Instructional module

### VARIABLE:

**Independent variables:** Simulation Based Teaching on learning disabilities for primary school students

**Dependent variable:** in this study dependent variables refers to the knowledge of primary school teachers regarding learning disabilities.

**Extraneous Variable:** Extraneous variables in this study are age, sex, educational qualifications, and years of experience, marital status and child psychology in the curriculum. In service education and experience in teaching and learning disabled children.

### SITE & SETTINGS:

**Site:** Primary school teachers at Alappuzha dist .

**Setting:** Selected primary schools at Alappuzha

**Population:** The population for the present study is teachers of primary schools at Alappuzha dist, Kerala

### SAMPLE AND SAMPLING TECHNIQUE:

**Sample:** Selected Primary school teachers of who met the selection criteria at Alappuzha district.

**Sampling Techniques:** Purposive sampling technique was used in the data collection of samples.

**Sample size:** The sample is used for the study 60 (sixty) teachers out of that 30 for experimental group and 30 teachers for control group.

### CRITERIA FOR SELECTION OF SAMPLE:

#### Inclusion Criteria:

- Teachers who are teaching in standard 1 to 5.
- Teachers of selected private schools at Alappuzha district, Kerala
- Teachers who are willing to participate in the study.

**EXCLUSION CRITERIA:**

- Teachers who are absent on the day.
- Teachers undergone in service education on learning disabilities.

**SELECTION AND DEVELOPMENT OF INSTRUMENT:**

**Descriptive of the tool:** The tool was organized into 2 sections. Section I & Section II.

**Section I:** Demographic data consists of 8 items seeking information about age, gender, marital status, educational qualification, years of experience, child psychology in the curriculum, in service education and experience in teaching children with learning disability.

**Section II:** 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.

**Reliability of the Tool:** The reliability of the tool in measuring the knowledge of teachers regarding learning disability among children is estimated by following split

half method and spearman’s Brown prophecy formula. It is reliable.

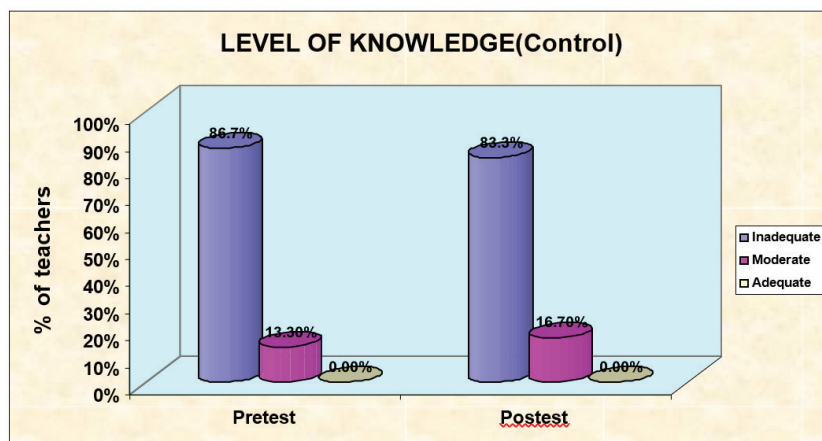
**Result**

**LEVEL OF KNOWLEDGE (EXPERIMENTAL GROUP)**

Level of knowledge	Pretest	Posttest
Inadequate	26 (86.7%)	0 (0.0%)
Moderately Adequate	4 (13.3%)	6 (20.0%)
Adequate	0 (0.0%)	24 (80.0%)

Table shows the pretest and posttest overall level of knowledge for experiment group. In pretest, 86.7% of primary school teachers are having inadequate knowledge regarding learning disability. In posttest, none of the primary school teachers is having inadequate knowledge regarding learning disability.

- Score 0 - 40
- < 50% inadequate knowledge = 0 – 20 score
- 51 -75% moderately adequate knowledge = 21 – 30 score
- 76-100% adequate knowledge = 31 -40 score



Cylinder diagram shows distribution of level of knowledge among of the experimental group of primary school teachers.

**LEVEL OF KNOWLEDGE (CONTROL)**

Level of knowledge	Pretest	Posttest
Inadequate	26 (86.7%)	25 (83.3%)
Moderately Adequate	4 (13.3%)	5 (16.7%)
Adequate	0 (0.0%)	0 (0.0%)

shows the pretest and posttest overall level of knowledge for control group. In pretest, 86.7% of primary school teachers are having inadequate knowledge regarding learning disability. In posttest, also 83.3% of

primary school teachers are having inadequate knowledge regarding learning disability.

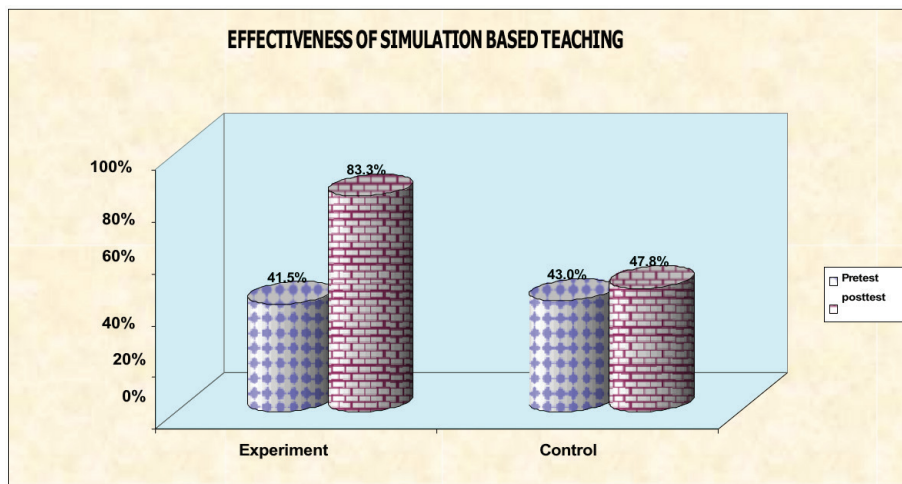
- Score 0 - 40
- < 50% inadequate knowledge = 0 – 20 score
- 51 -75% moderately adequate knowledge = 21 – 30 score
- 76 -100% adequate knowledge = 31 -40 score

Cylinder diagram shows level of knowledge among the control group of primary school teachers.

**EFFECTIVENESS OF SIMULATION BASED TEACHING**

	Pretest	Posttest	% of Difference	Net Benefit
Knowledge Experiment	41.50%	83.25%	41.75%	41.75%

It shows the effectiveness of the SIM considering the overall score, teachers gained 41.75 percent more knowledge on learning disability, after the administration of SBT. Thus, 41.75 percent of knowledge gain is the net benefit of % of teachers.



Cylinder diagram compares the experimental and control group primary school teachers pretest and posttest knowledge score on LD

**Conclusion**

The findings of the study was need of pediatric nurse to conduct training programme regarding learning disabilities among the primary school teachers. The study revealed that the level of knowledge regarding learning disability was low among school teachers in control group. The study concluded that need for providing knowledge on learning disability is an important strategy to utilize teachers as effective contributors towards child health services.

**RECOMMENDATIONS FOR FURTHER RESEARCH**

Based on the findings of the present study and keeping in mind the limitations of the study, the following suggestions are offered to conduct studies on

- A similar study can be undertaken by utilizing other domains like attitude and practice.
- A similar study can be conducted by using different teaching methods.

**LIMITATION OF THE STUDY**

The study is delimited to:

1. Knowledge of school teachers are assessed only through the structured questionnaire.
2. The study was restricted to selected schools in Alappuzha dist Kerala
3. The study was limited to primary school teachers.
4. The data was collected by purposive sampling **Vivek College of Education, Bijnor**

**Ethical Committee**

**Name of the Faculty:** Divyasree R, Devimaya R

**Designation:** Professor

**Subject:** Medical surgical nursing & OBG Nursing

**Title of the Topic:** Effectiveness of simulation based teaching regarding learning disabilities of primary school children among primary school teacher of selected schools at Alappuzha District Kerala

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**Source of Funding:** Self

**Conflict of Interest:** Nil

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