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Research Article

A Study to Evaluate the Effectiveness of Video Assisted Teaching Programme on Knowledge About Road Safety Among School Children (10-12 Years) In Selected Government Primary School at Dharmapuri

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Abstract

A study to evaluate the effectiveness of video assisted teaching programme on knowledge about road safety among School children (10-12 Years) in selected Government primary school at Dharmapuri.

Evaluative research design was adopted for this study. The sample size was 60 school children selected in selected school, Dharmapuri district, and purposive sampling technique was used to collect the data to select study sample. The data was collected with the help of knowledge Questionnaire. Pre-test was conducted followed by the video assisted teaching was given regarding road safety to the group's samples consist of 4-5 school children for the period of 25 to 30 minutes includes feedback, doubts clarification. Evaluation of intervention was done by conducting post-test, Post-test assessment was done for the same elderly people during the next visit on seventh day of intervention by using the same tool of Scale. The data collected, analyzed and interpreted on the basis of objectives by using descriptive and inferential statistics.

Introduction

Today's children are the adults of tomorrow who deserve them to inherit a safe, prosperous and healthy world, no work more important than protecting their environment. School age child develops sense of industry and learns the basic skills need to function in society. During school years, co-ordination improves and a sense of balance and rhythm develops which allows children to ride two-wheeled bicycle without knowing the traffic rules and regulations. This they expose themselves to hazards.

Road traffic accident is one of the main causes of the death and injury to children of school age. Accident tragically is often due to ignorance, carelessness, thoughtlessness and over confidence. The consequences of accidents affect seriously the health and growth of children and interfere in their study and future.

A road traffic accident refers to any accidents involving at least one road vehicle, occurring on road open to public circulation and in which at least one person is injured or killed. Every year more than 1.17 million people die in road accidents around the world. The majority of this death, about 70% occur in developing countries 65% of death involves pedestrians and 35% of pedestrian death in children.

India contributes one-sixth of the world's population, 29.5% of which belongs to the 0-14-year age group. India has witnessed a 10-fold increase in the number of fatalities from 1970 to 2015 with one accident occurring every minute and one fatality every four minutes.

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There was a remarkable increase in the total number of registered vehicles from 1.9 million in 1971 to 127.7 million in 2015. It has been reported that road traffic injuries are the second most frequent cause of death in the 5–14-year age group in India and more than half of all accident-related deaths in children are attributed to Road Traffic Accidents.

Statement of the problem

A study to evaluate the effectiveness of video assisted teaching programme on knowledge about road safety among School children (10-12 years) in selected Government primary school at Dharmapuri.

Objectives Of The Study

1. To assess the pre-test and post-test level of knowledge regarding road safety among school children at selected school in Dharmapuri.
2. To determine the effectiveness of Video assisted teaching regarding Road Safety among school children at selected school in Dharmapuri.
3. To find the association between pre-test level of knowledge regarding road safety among school children at selected school in Dharmapuri with their demographic variables.

Operational Definition

Effectiveness

In this study effectiveness refers to the increase in the level of knowledge of school children on road safety measures after the structured teaching programme.

Video Assisted Teaching

It refers to a pre-planned session conducted to impart knowledge on road safety measures to the selected school children which included lecture cum discussion methods using video film as Audio-Visual aids.

Knowledge

Knowledge refers to the understanding and awareness of the school children on road safety as measured by the scores obtained from the structured questionnaire.

Road safety

Road safety measures refers to meaning, causes of road traffic accidents, risk factors, rules and regulations, traffic rules, impacts of road traffic injury, preventive measures taken for traffic accidents and strategies followed for keeping children safe on the road.

School children

In this study, school children refer to the male and female children belonging to the age group of 10-12 years studying 5^{th} standard.

Hypothesis

- **H1:** There is a significant improvement in the level of knowledge regarding road safety among school children after the structure teaching programme.
- **H2:** There is a significant association between knowledge regarding road safety measures and their selected demographic variables among school children. There will be a significant association between the level of knowledge regarding road safety among school children with their selected demographic variables

Methodology

Methodology is designed to develop, validate, implement and to evaluate the research tools and techniques.

Methodology requires a sound specific and exhaustive literature review to identify the theories and underlying concept. (Polit & Beck, 2018).

This Article includes research approach, research design, variables, settings, population, sampling technique, sample selection criteria, data collection tool, pilot study, data collection procedure and plan for data analysis.

Research Approach

- "It is an applied form of research that involves finding out how well a programme, practice, procedure or policy working." (Polit & Beck, 2014).
- The research approach used for this study was quantitative evaluative approach.

Research Design

- It states that research design is the overall plan for collecting and analyzing data, including specifications for enhancing the internal and external validity of the study. (Polit and Hungler, 2016).
- The research design adopted for this study is pre- experimental, one group pre-test, post- test design, to measure the effectiveness of Video assisted teaching programme on knowledge about road safety among the school children.

Variable Under Study

- According to Polit and Beck, (2016) a variable is an attribute of a person or object that is, taken on different values.
- The present study was aimed at unravelling and understanding the effectiveness of intervention or treatment.

Independent variables

- Independent variable is a stimulus or activity that is manipulated or varied by the researcher to create an effect on dependent variable.
- The independent variable is also called a treatment or experimental variable. (Suresh K. Sharma, 2014).
- In the present study the independent variable was Video assisted teaching programme Knowledge to wards Road safety.

Study Setting

- Study setting is the physical location and condition in which data collection takes place in the study. (Polit & Hungler, 2014).
- Selection of the area for the study is one of the essential steps in the research process. The selection of settings for the present study was on the basis of availability of the subjects, feasibility of conducting the study, economy of time and energy. The study was conducted in Government primary school, Pothapuram at Dharmapuri. It was away from college about 5 km, totally 60 students were studying V Std in that school.

Sample

- A sample is a portion of the population that has been selected to represent the population of interest. Thus, it is a subset of the population elements. (Polit and Beck, 2014).
- Sample of the studies was school students who are studying V STD Government primary school Pothapuram at, Dharmapuri.

Sample Size

- The number of sampling units is included in the sample (Polit and Hungler, 2010).
- The sample for the present study comprised of 60 students of studying V STD in the Government primary school Pothapuram at Dharmapuri.

Sampling Technique

- Sampling technique refers to the process of selecting a portion of population to represent the entire population. (Polit and Beck, 2014)
- Non-Probability Purposive sampling technique was used for the present study.

Criteria for Selection of Sample

Inclusion criteria: School children

- Who are willing to participate in the study?
- Who are available during the period of data collection?
- Who can able to communicate either in tamil or English?
- Who gave consent to participate in the study?
- All students Who are studying V Standard Both males and females.
- Who are attending classes regularly?

Exclusion criteria: School children

- Who are not willing to participate in the study?
- Who are absent during the period of data collection?
- Sick children
- Mentally and physically challenged students
- Who are already attending road safety educational programme?

Polit study

According to Polit and Hungler, (2011) "A pilot study is small scale version done in preparation for a main study."

After obtaining permission from the concerned authority the pilot study was conducted in the month of August 2025 at Government primary school Pothapuram at Dharmapuri. A total of 10 school student of studying V Std were selected for the study by using purposive

sampling technique and pre-test was conducted by using structured knowledge questionnaire. Immediately after the pre-test, Video Assisted teaching was administered to the school students who were included for the study. Post-test was conducted on after four weeks of the teaching intervention. The post-test mean knowledge score were higher than the pre-test means knowledge scores. The results of the data revealed that the tool was feasible to conduct the study.

Pre-intervention stage: Pre-test

In this selected samples were contacted, interpersonal relationship was entrenched, prior time was taken and the importance and purpose of the study was explained to the study participants. Pre-test was conducted for the school students studying V standard who are attending regular school in Government primary school at Dharmapuri by administering semi structured knowledge questionnaire to assess the knowledge on road safety among school students. The data collected from 4-5 school children per day for the period of one month. Each participant took 45 minutes to fill the questionnaire.

Intervention stage

Administration of self-instructional module

After the pre-test, the Video assisted teaching programme regarding road safety of power point presentation was presented to the groups of samples consist of 3-5 school children through instructing and lecturing, discussing on road safety for the period of 25 to 30 minutes. The participants were exhilarated and interested during the session.

The participants were given time to ask queries after the instruction.

Post Intervention stage: Post-test

Evaluation of Video assisted teaching programme was done by conducting post-test; Post-test assessment was done for the same school children after 7 days by using the same tool of self-Structured multiple-choice questions through online. The study participants were very cooperative.

Frequency and percentage distribution of pretest level of knowledge regarding road safety among school children at selected Government primary school in Dharmapuri.

Level of Knowledge	Frequency	%
Adequate knowledge (21-30)	3	6
Moderately adequate knowledge (11-20)	14	28
Inadequate knowledge (0-10)	33	66

Frequency and percentage distribution of posttest level of knowledge regarding road safety among school children at selected Government primary school in Dharmapuri.

Level of Knowledge	Frequency	%
Adequate knowledge (21-30)	13	26
Moderately adequate knowledge (11-20)	27	54
Inadequate knowledge (0-10)	10	20

Mean Difference between pre and posttest level of knowledge regarding road safety among school children at selected Government primary school in Dharmapuri.

Test	Mean	SD	Mean Difference
Pre test	9.04	4.1	5.4
Post test	14.46	5.7	

Effectiveness of structured teaching program regarding road safety among the school children.

Test	Mean	SD	t value
Pre test	9.04	4.1	**12.31**** Table value: 2.704
Post test	14.46	5.7	

****Significant at p>0.01 level**

Effectiveness of structured teaching program regarding road safety among the school children.

S. No	Demographic Variables	Level of Knowledge			Chi square value	Results
		Adequate	Moderate	Inadequate		
1	**Age in years**				2.12	df:4 Tvalue: 9.49 NS
	9 years	0	5	11		
	10 years	1	5	10		
	11 years	2	4	12		
2	**Gender**				2.88	df: 2 Tvalue: 5.99,NS
	Male	2	9	13		
	Female	1	5	20		
3	**Religion**				0.22	df:4 Table value: 9.49,NS
	Hindu	2	5	14		
	Muslim	1	4	11		
	Christian	0	4	9		
4	**Number of siblings**				0.66	df:4 Table value: 9.49,NS
	No sibling	1	5	11		
	One	1	7	16		
	Two	1	2	6		
5	**Birth order of child**				4.6	df:4 Table value: 9.49,NS
	First	2	5	15		
	Second	1	4	14		
	Third	0	5	4		
6	**Residing in**				1.22	df:4 Table value: 9.49,NS
	Urban area	1	4	12		
	Semi urban	1	3	10		
	Rural area	1	7	11		
7	**Family type**				1.56	df: 2 T value: 5.99 NS
	Nuclear	3	8	21		
	Joint	0	6	12		
8	**Highest Educational level of Father**				2.51	df: 6 Table value: 12.59 NS
	Middle school	1	4	3		
	High School	1	5	9		
	Higher Secondary	0	2	11		
	Graduation	1	3	10		
9	**Highest Educational level of Mother**				5.17	df: 6 Table value: 12.59 NS
	Middle school	0	4	6		
	High School	1	2	15		
	Higher Secondary	1	6	10		
	Graduation	1	2	2		
10	**Father's occupation**				2.72	df:4 Table value: 9.49 NS
	Daily wages	1	3	15		
	Skilled worker	1	5	9		
	Self employed	1	6	9		
11	**Mother's occupation**				1.22	df:4 Table value: 9.49 NS
	Unemployed	2	8	10		
	Daily wages	0	3	14		
	Self employed	1	3	9		
12	**Monthly income of the Family in Rs.**				1.5	df: 6 Table value: 12.59 NS
	< 5000	1	2	3		
	5001- 10000	1	6	16		
	10001-15000	1	5	11		
	>15001	0	1	3		
13	**Previous source of information regarding road safety**				2.6	df: 6 Table value: 12.59 NS
	Parents/Siblings	1	6	11		
	Friends	1	2	6		
	Teachers	1	4	10		
	Media/Printed materials	0	2	6		
14	**Means of reaching school**				4.31	df: 8 Table value: 15.50 NS
	By walk	1	4	11		
	By bicycle	1	2	6		
	School vehicle	0	3	3		
	Public transport	0	3	5		
	Dropped by parents	1	2	8		

Recommendations

- Similar study can be conducted by using experimental and control group.
- The study can be replicated on larger samples; thereby findings can be generalized to a larger population.
- A comparative study can be conducted in two different schools with urban and rural setup.
- A similar study can be done with use of other teaching methods and teaching aids.
- Educational programme on road safety can be conducted for the family members also.

Summary

This Article dealt with the summary, findings, conclusion, nursing implications and recommendations.

Article Information

Disclaimer (Artificial Intelligence): The author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.), and text-to-image generators have been used during writing or editing of manuscripts.

Competing Interests: Authors have declared that no competing interests exist.

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