"Effectiveness of Planned Teaching Programmed on Knowledge Regarding Prevention and Immediate Management of Road Traffic Accidents among School Children in Selected Senior Secondary Schools"

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Abstract: *A Quasi experimental study to assess the effectiveness of planned teaching programme on knowledge regarding prevention and immediate management of road traffic accidents among school children in selected senior secondary schools of Udaipur, Rajasthan. The sample consisting of 180 school students was selected by using simple random technique. The tool comprised of structured self-administered questionnaire. The pretest was conducted and the planned teaching programme was administered. The post test was conducted after one week. The data obtained were analyzed by using descriptive and inferential statistics. The mean score of post-test knowledge 32.03(88.97%) was apparently higher than the mean score of pre-test knowledge 19.6(54.53%), suggesting that the planned teaching progrmme was effective in increasing the knowledge of the school students regarding prevention and immediate management of road traffic accidents. The mean difference is 12.43 between pre-test and post-test knowledge score of the school students was found to be significant.*

Key words: *effectiveness, planned teaching progrmme, school students, road traffic accidents, one group pre – test post – test, Quasi experimental study.*

I. Introduction

Today's children are the tomorrow's citizens. So it's very much important to protect the life of the children and to provide safer environment. As the country develops, traffic had become the burning problem. For a city with an estimated population of between 5.5 million and 6 million, the number of fatal Road accidents is considered alarming. A high – level committee dealing with the city's traffic and transport needs recently mooted are idea of reducing congestion on roads through plans such as a parallel elevated drive way on main thorough fares. The large number of vehicles on roads engineered for a much smaller number is bound to increase the accident rate. Other factors include the lack of facilities for pedestrian, drunk driving during weekends and many one way roads through which drivers tend to drive speedily. [2]

Apart from the accident rate, other traffic violations such as jumping red lights at intersections have increased. Pedestrian road traffic injuries among children and adolescents are most important cause of death and disability. Children's should have their bicycle equipped with the latest color and style of projecting reflector.

According To Research Study (Hindustan Times) (2018), in Rajasthan, the state registered 10,465 deaths in road accidents in 2016 compared to 10,510 in 2015, according to police data. "The number of injuries and cases of road accidents has also come down by 2,050 and 1,006 in 2016. Our target in 2017 will be to bring them further down by holding training camps and coordinating with other government departments," said additional director general of police (traffic).[28]

"The fall in road accidents has been possible because of proactive measures taken by the police to spread awareness and check rash driving. Another factor is involvement of voluntary organizations working for road safety," said additional director general of police (traffic).[28]

The traffic police will launch campaigns this year in coordination with transport, health and other departments to ensure road safety, the ADG said. Jaipur district recorded the maximum road accident deaths at 1,406, followed by Ajmer (598), Alwar (563), Udaipur (534) and Bhilwara (451), according to police figures.[28]

Bhilwara, Tonk, Udaipur, Rajsamand, Dholpur and Bharatpur districts registered the maximum increase in road accident deaths. Accidents came down substantially in Sikar, Sriganganagar, Bundi, Chittorgarh and Karauli districts, police said.[28]

In Udaipur, according to research   study, 534 RTA cases were studied which caused 366(91.50%) injury and 34(8.5%) fatal injury (deaths). Among all the RTA cases there were 252 drivers and among them 169 drivers had driving license. Majority of RTA cases were male 324(81.00%), while 76(19.00%) female, indicating 4:1, male female ratio. Males are more prone to meet an accident because of the preponderance act of driving the motor vehicle along with more outdoor activity than females. Road traffic accident costs a lot to individuals, families, communities and nations. He or she is a member of a family and a community. The people around him or her are deeply affected.[29]

If the children are met with the accidents, it will affect the children's life in many ways such as, loss of limbs, psychological depression, psychological disturbances, etc. So, it's important to protect the children's from the road traffic accidents.

II. Research Elaborations

Statement of problem-
"Evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and immediate management of road traffic accidents among school children in selected senior secondary schools of Udaipur, Rajasthan".

III. Objectives
1. To assess the knowledge regarding prevention and immediate management of road traffic accidents among school children.
2. To evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and immediate management of road traffic accidents among school children.
3. To find out the association between pre test knowledge scores regarding prevention and immediate management of road traffic accidents with selected socio demographic variables.

IV. Hypothesis
H_1: There is a significant difference between pre and post test knowledge scores of school children regarding prevention and immediate management of road traffic accidents.
H_2: There is a significant association between pretest knowledge score with selected socio demographic variables.

V. Materials and Methods
Population- Senior secondary school students.
Sample- The senior secondary school students studying in selected senior secondary schools in Udaipur.
Sample size- 180 senior secondary school students.
Settings- The study was conducted in following selected senior secondary schools at Udaipur: Scholar Arena sr.sec. school Udaipur, Guru Nanak Public sr. sec. school Udaipur, Jawahar Jain sr. sec. school Udaipur.
Sampling technique- simple random technique
The conceptual framework for the study was developed on the bases of WHO's System Model.

VI. Research Design
The research design selected for the present study was a one group per-test post-test research design.

PRE TEST (Dependent variable)	INTERVENTION (Independent variable)	POST TEST Dependent variable)
O1 Knowledge of school students	X Planned teaching programme	O2 Knowledge of school students

Table 1:   Quasi experimental One group pre and post-test research design

The interpretations of the symbol are as below
O1   -   Administration of pretest knowledge Questionnaire
O2   -   Administration of posttest knowledge Questionnaire
 X   -   Intervention (planned teaching programme)

ETHICAL CONSIDERATION

After obtaining permission from research committee of Geetanjali College of nursing, prior permission was obtained from Principal of the selected sr. sec. schools at Udaipur. Consent was taken from each participants who had participated in the study.

DESCRITION OF THE TOOL

Section A- Demographic Data: Consist of selected socio-demographic variables such as age in years, gender, religion, class of study, stream of study, habitat, parents educational qualification, source of information, family income, about daily travelling, about using own vehicle.

Section B- Tools and scoring technique: A structured self-administered questionnaires was selected based on the objective of the study as it was considered the based and appropriate instrument to elicit the response from the literate subject.

SCORING

The knowledge of school students regarding the outcomes of prevention and immediate management of road traffic accidents was scored as follows, one mark for each correct answer and zero marks for incorrect answer. The maximum score was 35, to interpret level of knowledge the score was distributed as follows; Interpretation of knowledge:

Level	Range
Inadequate knowledge	<50 %
Moderate knowledge	51-75 %
Adequate knowledge	>75 %

An answer key was prepared for scoring answer to the structured knowledge questionnaire.

DATA COLLECTION AND DATA ANALYSIS

The data was presented under the following sections
Section-I: Description of socio-demographic variables of the respondents.

Section-II: Distribution of Respondents according pre-test and post-test level of knowledge score.

Section-III: Effectiveness of planned teaching programme on knowledge of sr. sec. school students regarding prevention and immediate management of road traffic accidents.

VII. Result

Table 2: frequency and Percentage distribution of respondents to their level of knowledge score.

N=180

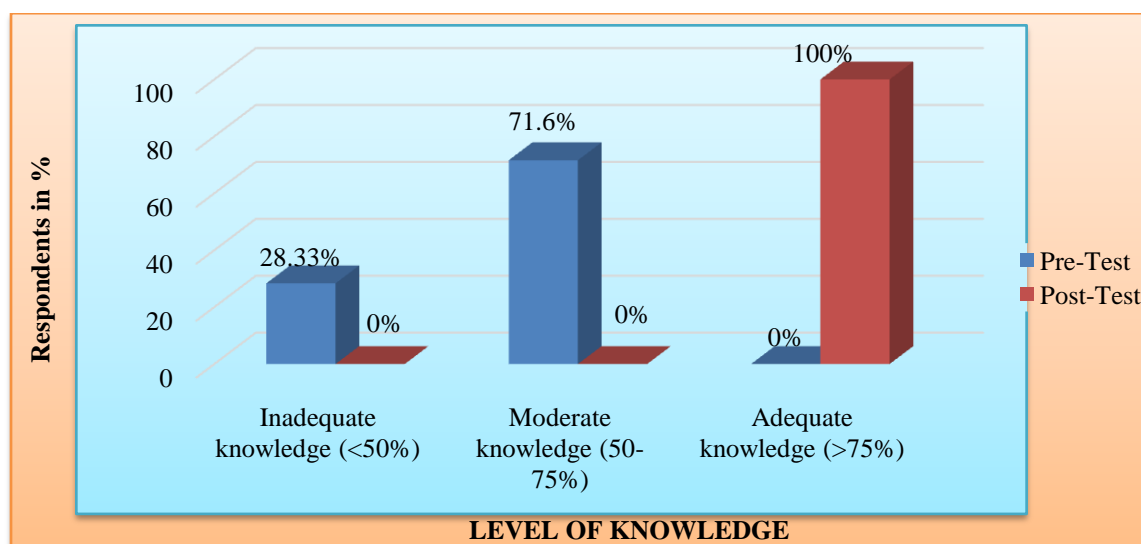| Level of knowledge	Frequency		Percentage	
	Pre test	Post test	Pre test	Post test
Inadequate knowledge (<50%)	51	0	28.33%	0%
Moderate knowledge (50-75%)	129	0	71.6%	0%
Adequate knowledge (>75%)	00	180	00%	100%
Total	180	180	100%	100%

Figure 2: Distribution of respondents by the level of knowledge

SECTION: III

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION AND IMMEDIATE MANAGEMENT OF ROAD TRAFFIC ACCIDENTS AMONG SCHOOL CHILDREN IN SELECTED SENIOR SECONDARY SCHOOLS.

The "Z" value was computed to determine the effectiveness of planned teaching programme on knowledge of sr. sec. school students regarding prevention and immediate management of road traffic accidents.

The following research hypothesis was stated

H$_1$: There is a significant differences between pre and post test knowledge scores of school children regarding prevention and immediate management of road traffic accidents.

H$_2$: There is a significant association between pretest knowledge score with selected socio demographic variables.

Table 3: Area wise pre-test and post-test knowledge score N=120

Area	Maximum score	Pre-test			Post-test		
		Mean	Mean %	SD	Mean	Mean %	SD
Introduction of road traffic accidents	13	8.25	22.91	1.54	11.77	32.69	1
prevention and immediate management of road traffic accidents	23	11.37	31.58	2.35	20.26	56.27	1.73
Total	36	19.63	54.53	2.23	32.03	88.97	1.83

Table3: The result showed that the mean, standard deviation and percentage of pre-test and post-test knowledge score on different areas of prevention and immediate management of road traffic accidents.

In the area of Introduction of road traffic accidents, mean score 8.25 and SD 1.54 in pre-test of the respondents and mean value 11.77 and SD 1 in post-test of the respondents. In the area of prevention and immediate management of road traffic accidents, the mean score 11.37 and SD 2.35 in pre-test of the respondents and mean score 20.26 and SD 1.73 in post-test of the respondents. Therefore, the results confirmed that the planned teaching programme was highly effective in improving the knowledge of sr. sec. school students regarding prevention and immediate management of road traffic accidents.

Table 4: Effectiveness of planned teaching programme on knowledge of sr. sec. school students regarding prevention and immediate management of road traffic accidents

Knowledge assessment	Mean	Mean %	SD	Enhancement	Enhancement %	df	Z	Inference
Pre test	19.6	54.53	2.23	12.43	34.44	17	54.6	

Post test	32.03	88.97	1.83			9	1	S*

S=Significant

Table 4: The result showed that the mean post test knowledge score 32.03(88.97%) is greater than the mean pre test knowledge score 19.6(54.53%). The enhancement in the knowledge of respondents is 12.43(34.44%). The 'Z' value of 54.61 was significantly higher than the table value 1.96 at 0.05 level of significance. Hence research hypothesis H1 was accepted. This indicates that the planned teaching programme regarding prevention and immediate management of road traffic accidents was effective in improving the knowledge score of respondents regarding prevention and immediate management of road traffic accidents.

VIII.   Conclusion

This study concluded that there is improvement in the level of knowledge of sr. sec. school students which indicates that the planned teaching pragramme is effective. The demographic variables of patients significantly associated with the pre-test knowledge score. The development of planned teaching programme will help the sr. sec. school students to enhance their knowledge regarding prevention and immediate management of road traffic accidents.

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