A Study to Assess the Effectiveness of Structured Teaching Programme on Traffic Rules Among 8th and 9th Class Students, Little Pearls High School, Neredmet, Hyderabad, Andhra Pradesh, India

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Abstract

A pre-experimental one group pre-test post-test research design was used for the study. 30 sample taken from Little Pearls High school, Hyderabad were selected by simple random sampling technique. Socio-demographic data were assessed using structured questionnaire. Knowledge assessed by structured questionnaire as pre-test followed by structured teaching program implemented and then again knowledge assessed by structured questionnaire as post-test. Data were analysed and interpreted by descriptive and inferential statistics.

Results and Conclusion: The analysis revealed that overall pre-test scores on knowledge related to traffic rules among children were mean 42.63 (SD = 97.47), whereas in post-test highest mean was observed 85.26 (SD = 229.5) with a paired "*t*" value 14.96 which is highly significant. There is a significant association between demographic variables and knowledge score.

Keywords: Knowledge; Structured teaching program; Traffic rules; Students.

Introduction

Road traffic accidents continue to be a major health and social problem in developing countries. Globally road traffic accidents the 7th leading cause of death in all age groups, according to WHO estimation road traffic accidents is the 9th leading cause of death as per basic of Daily (Disability Adjusted Life Years lost).[1] More than 40% reported accidents pedestrians and children less than 16 years of age contribute 20% in developing countries due to lack of road safety knowledge leading to unsafe behaviour of children.[2] So there is a need for road safety education in schools which helps to reduce mortality and morbidity among school going children.[3]

Statement of Problem

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Objectives

1. To assess the level of knowledge regarding traffic rules among 8th and 9th class students by pre -test.
2. To develop and implement the structured teaching programme on traffic rules.
3. To evaluate the effectiveness of structured teaching programme on traffic rules

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by comparing pre-test and post-test knowledge score.

Hypothesis

H$_1$: The mean post-test knowledge score of the school children regarding traffic rules will be significantly higher than the mean pretest knowledge score.

H$_2$: There will be significant association between the pre-test knowledge score and the selected demographic variables.

Setting and Design

- Little Pearls High School, Neredmet, Hyderabad.
- Pre-experimental one group pretest and posttest design.

Materials and Methods

- The research approach used for this study was evaluative approach and Pre-experimental one group pre-test and post-test design.

The independent variable was structured teaching programme and the dependent variable was knowledge of school children regarding traffic rules. Simple random sampling technique was used. Sample size 30 students. The data collection was done by structured questionnaire.

Statistical Analysis

The data was analysed by using descriptive and inferential statistics.

Results

The findings in the table 1 and table 2 Chi-square values shows that there is a significant relationship between knowledge and demographic variables like gender, educational background and occupational status of father. The findings in Table 3 the pre-test revealed that only 76.6% had below average, 23.3% had average and none of the students had above average knowledge on traffic rules. The post-test analysis revealed that 6.66% of the students gained high knowledge with highly significant

Table 1: Frequency and percentage distribution of school children. (n = 30)

Variables	Category	Frequency	Percentage
Age in years	12–14	15	50
	15–17	15	50
Gender	Male	20	66.6
	Female	10	33.3
Educational Background	8th class	10	33.3
	9th class	20	66.6
Educational status of the Father	Primary education	4	13.3%
	Secondary education	9	30%
	College education	10	33.3%
	Illiterate	7	23.3%
Educational status of the mother	Primary education	10	33.3%
	Secondary education	6	20%
	College education	4	13.3%
	Illiterate	10	33.3%
Occupational status of the Father	Employee	5	16.6%
	Daily wage worker	17	56.6%
	Self-employment	8	26.6%
	unemployment	—	—
Occupational status of the mother	Employee	3	10%
	Daily wage worker	9	30%
	Self-employment	4	13.3%
	unemployment	14	46.6%
Mode of transportation to School	walk	8	26.6%
	Two wheeler	18	60%
	Bus	2	6.6%
	Four wheeler	2	6.6%
Previous history of accidents	Yes	12	40
	No	18	60

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Table 2: Chi–square values showing the relationship of knowledge scores of children with selected demographic variables   N = 30

Variables	X² value of knowledge	X² value at 5% level (df)
Age	6.81(NS)	5.99(3df)
Gender	1.64*	3.84(1df)
Educational background	3.35*	3.84(1df)
Educational status of father	15.2(NS)	7.81(3df)
Educational status of mother	12.68(NS)	7.81(3df)
Occupational status of father	4.52*	7.81(3df)
Occupational status of mother	8.47(NS)	7.81(3df)
Mode of transportation	11.31(NS)	7.81(3df)
Previous history of accidents	15.04(NS)	3.84(1df)

Table 3: Frequency and percentage distribution of pretest and posttest level of knowledge among school children on traffic rules

Knowledge variable	Below average		Average		Above average	
	Frequency	%	Frequency	%	Frequency	%
Pre-test	23	76.6	7	23.3	—	—
Post-test	—	—	2	6.66	28	93.3

Table 4: Comparison of mean knowledge score on effectiveness of structured teaching programme among school children on traffic rules.

Knowledge Variable	Maximum Score	Mean	Mean %	SD	Improvement of mean
Pre-test	40	18.1	36.2%	97.74	49.06
Post-test	40	42.63	85.6%	229.5	

** *Significant at 5% level at 29 df

Table value t = 20.5

paired 't' value 14.96% followed by above average knowledge 93.3% and none of the students scored low knowledge levels which indicates effectiveness of STP. In table 4 the results of the study showed that overall mean knowledge score of pre-test 42.63 (SD = 97.47) whereas post-test highest mean was observed 85.26 (SD = 229.58), with a paired t value 14.96 which is highly significant and related to research hypothesis.

Discussion

Traffic rules plays a vital role in our daily life especially among school going children to prevent road traffic accidents. Hence the study has undertaken an innovative strategy to impart education on traffic rules among 8th and 9th class students in order to prevent accidents, to preserve health of children which is valuable asset of an every nation. A Pre-experimental study was conducted the pre-test was administered to assess the existing knowledge on traffic rules thereafter structured teaching programme on Traffic rules imparted to 8th and 9th class students. A post-test was administered to assess the effectiveness of structured teaching programme. The effectiveness of STP to improve knowledge had been supported in prior studies conducted by Zhonghua Liu Xing Xue, 2009 August conducted experimental study to evaluate the intervention effects for road traffic accidents prevention among middle school students Hefei city, China.[4] The findings improved knowledge levels in intervention group and control group. Education should be carried out in the early stage of childhood with newer and more effective intervention approaches.

Conclusion

The findings revealed that majority of the students were not having adequate knowledge related to traffic rules inspite of inclusion of the topic in the curriculum. The study have implications in the areas of nursing practice (school health nurse), nursing education and administration, community health practice and research. The study proves that education to school children is effective in preventive aspects of community health in order to prevent road traffic accidents for our tomorrow's citizens.

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