

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ROAD SAFETY AMONG ADOLESCENTS IN SELECTED SCHOOL AT PUDUCHERRY

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Abstract

Background: Road traffic injuries are a major public health issue and a leading cause of death among adolescents worldwide. This study aimed to assess the effectiveness of a structured teaching programme on road safety knowledge among adolescents.

Methods: Non-experimental research design was conducted among 38 adolescents from Thiyagi Subramaniya Padaiyatchi Government higher secondary school, Puducherry. Participants were selected using convenience sampling. Data were collected using a structured questionnaire assessing demographic variables and road safety knowledge. A structured teaching programme was conducted, and a post-test was conducted after two weeks. Data were analysed using descriptive statistics, paired 't' tests, and chi-square tests.

Results: In the pre-test, 50% of students had inadequate knowledge, 44.7% had moderate knowledge, and 5.3% had adequate knowledge. Post-intervention, all students (100%) achieved adequate knowledge. The mean knowledge score increased from 13.61 ± 3.10 in the pre-test to 23.63 ± 1.05 in the post-test ($t=18.50$, $p<0.001$). No significant association was found between demographic variables and knowledge levels.

Conclusion:

This study, conducted among 38 students at Thiyagi Subramaniya Padaiyatchi Government Higher Secondary School, Puducherry, found that all participants gained adequate knowledge on road safety after the structured teaching programme, highlighting its importance in preventing accidents.

Keywords: Structured Teaching Programme, Road Safety, Adolescents, Knowledge

Introduction

Road traffic accidents (RTAs) are a significant cause of morbidity and mortality among adolescents globally. According to the WHO, more than 1.2 million people die each year due to RTAs, with a substantial proportion being children and adolescents. India ranks first in the number of road accident deaths, contributing to 11% of global accident related to death. Adolescents are particularly vulnerable due to limited experience, risk-taking behavior, and lack of adequate road safety education. Structured teaching programmes can help improve knowledge and awareness among adolescents, thereby reducing accident rates. This study evaluates the effectiveness of such a programme in a higher secondary school at Puducherry.

Methods

STUDY DESIGN:

Non-experimental research design was adopted.

SETTING:

Thiyagi Subramaniya Padaiyatchi Government higher secondary school, Puducherry.

PARTICIPANTS:

38 adolescents studying in the 11th and 12th standard.

SAMPLING TECHNIQUE :

Non-probability convenience sampling.

INCLUSION CRITERIA:

- The students who were studying in 11th and 12th standard.
- The students who were available during data collection
- The students who were willing to participate.
- The student who can understand the Tamil and English language.

EXCLUSION CRITERIA:

- The students who were sick.
- The students who are not available at the time of data collection.
- The students who are not willing to participate.

DATA COLLECTION TOOL:

A structured questionnaire with 25 multiple-choice questions on road safety, validated by experts.

INTERVENTION:

Structured teaching programme covering road safety rules, signs, and safe behavior on roads.

DATA ANALYSIS:

Descriptive statistics were used to summarise demographics. Paired 't' tests assessed differences between pre-test and post-test scores. Chi-square tests examined associations between demographic variables and knowledge levels.

Results

- **Demographics:** The majority of participants were 16 years old (68.4%), male (55.3%), and Hindu (84.2%). Most fathers (39.5%) were skilled workers, and mothers (34.2%) were skilled or semi-skilled workers. Health team members (36.8%) were the most common source of road safety information.
- **Knowledge Levels:** Pre-test results showed 50% with inadequate knowledge, 44.7% with moderate knowledge, and 5.3% with adequate knowledge. Post-test results revealed 100% of participants had adequate knowledge.
- **Statistical Analysis:** Mean pre-test score was 13.61 ± 3.10 , increasing to 23.63 ± 1.05 in the post-test. The paired t-test value was 18.50 ($p < 0.001$), indicating significant improvement. No significant associations were found between demographic variables and knowledge improvement.

Frequency and percentage distribution of level of knowledge regarding road safety among adolescent in pre-test

N=38

LEVEL OF KNOWLEDGE	PRE-TEST	
	Frequency (n)	Percentage (%)
Inadequate knowledge	19	50%
Moderate knowledge	17	44.7%
Adequate knowledge	2	5.3%
Total	38	100%

Frequency and distribution of level of knowledge regarding road safety among adolescence in pre-test among 38 students, 19 (50%) of students had inadequate knowledge, 17(44.7%) had moderate knowledge and 2 (5.3%) had adequate knowledge in pre-test.

Frequency and percentage distribution of level of knowledge regarding road safety among adolescence in post test

LEVEL OF KNOWLEDGE	POST-TEST	
	Frequency (n)	Percentage (%)
Inadequate knowledge	0	0.0%
Moderate knowledge	10	0.0%
Adequate knowledge	38	100%
Total	38	100%

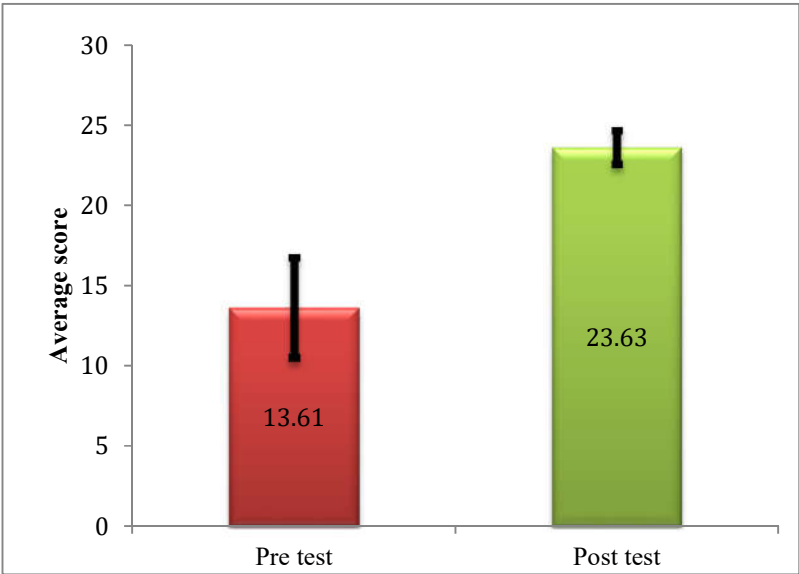
Frequency and percentage distribution of level of knowledge regarding road safety among adolescents, after intervention all student 38 (100%) were gained an adequate knowledge regarding road safety.

Comparison of effectiveness of structured teaching programme on knowledge regarding road safety among school students in the pre-test and post test

n=38

Knowledge Score	Mean	SD	Paired differences	Paired t-test	p-value
Pre-test	13.61	3.098	10.026	18.500	<0.001
Post-test	23.63	1.051			

The effectiveness of structured teaching programme in pre-test and post-test regarding road safety among school student, the pre-test and posted its mean level of knowledge was 13.61 and 23.63. Obtained test was 18.500 ($p<0.001$) and there was a significant difference in pre-test and post-test level of knowledge that it was interfered That education programme was highly effective and improvement of knowledge regarding road safety. This result is representing the figure:11



Comparison of pre-test and post-test, level of knowledge regarding road safety among adolescents.

Discussion

The study demonstrated that a structured teaching programme can significantly enhance adolescents knowledge of road safety. Similar findings have been reported in previous studies, indicating that educational interventions are effective in changing awareness and attitudes. The absence of associations between demographic variables and knowledge improvement suggests that such programmes are universally beneficial regardless of age, gender or socio-economic background.

Conclusion

The present study was conducted among 38 school students in Thiyagi Subramaniya Padaiyatchi Government higher secondary school, Koravallimedu, Manapet post, Puducherry. The knowledge of school students was assessed using structured questionnaire, this study result showed that after structured teaching programme that all students 38 (100%) were gained and adequate knowledge regarding road safety and there was association found between knowledge of all students with demographic variables. Hence, this study proved that the knowledge regarding road safety is essential to prevent from road safety and its consequences.

References

1. Redhwan AJ, Karim AJ. Knowledge, attitude and practice towards road safety regulations among university students, Malaysia. *Int Med J.* 2010;17(4):25-9.
2. WHO. Global Status Report on Road Safety. Geneva: World Health Organization; 2015.
3. Centers for Disease Control and Prevention. Injury prevention and control: Data and statistics (WISQARS). Atlanta: CDC; 2017.
4. Peden M, Scurfield R, Sleet D, Mohan D, Hyder AA, Jarawan E, et al. World report on road traffic injury prevention. Geneva: World Health Organization; 2004.
5. Mary AE, Chithra E. A cross-sectional study to assess the knowledge, attitude, and practice towards road safety rules and regulations among higher secondary school students in Chennai. 2016; Page no: 779-789.

6. Tripura A. Road safety knowledge, practices, and determinants among undergraduate medical students of Agartala Government Medical College, Govinda Ballabh Hospital. *Int J Med Sci Public Health*. 2014; Page no: 202-205.
7. Sharma S. Knowledge, attitude, and practice towards road traffic regulations among health science students in Uttarakhand. 2017; Page no: 608-614.
8. Swamith S. Road safety awareness and practices among school children of Chandigarh. 2006; Page no: 96-98.
9. Thamarai PS. A study to assess the knowledge regarding prevention of road traffic accidents among adolescents. *Indian J Surg Nurs*. 2013; Page no: 91-95.
10. Adogu OU, Ilika AL. Knowledge and attitude towards road traffic codes among commercial motorcycle riders in Anambra State. 2004; Page no: 297-300.