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## Research Article

# EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE REGARDING KNOWLEDGE AND PRACTICE ON PREVENTION OF ROAD TRAFFIC ACCIDENTS AMONG ADOLESCENCE IN SELECTED COLLEGES IN BANGALORE CITY

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### ABSTRACT

Currently motor vehicle accidents rank ninth in order of disease burden and are projected to be ranked third in the year 2020. Worldwide, the number of people killed in road traffic crashes each year is estimated to be almost 1.2 million, while the number injured could be as high as 50 million. The focus of this study is to give awareness to the young drivers and their passengers on road traffic safety, ability to master different driving situations and vehicle manoeuvring. Sixty adolescent students were asked to participate for the study. The participants were selected by using purposive sampling method. One group pre-test post-test quasi experimental design was used to evaluate the effectiveness of self-instructional module on prevention of road traffic accidents among adolescents. Self-administered structured knowledge questionnaire and practice checklists were used to collect data from the subjects. The result of the study clearly evidenced that there was significant enhancement in case of knowledge on prevention of road traffic accidents and practice of preventive measures.

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## INTRODUCTION

The alarming increase in morbidity and mortality owing to road traffic accidents over the past few decades is a matter of great concern. Prevalence was found to be significantly associated with lower age group and males who are more prone to accidents involve motorcyclists and bike riders. Road traffic accidents are the main cause of death of young men worldwide. 195,000 adolescents are killed each year in traffic accidents. More than 60% of deaths in adolescents are by traffic accidents. Accidents were a major cause of total mortality with the male female ratio being 4:1. Of the worldwide annual average of 700,000 road accidents, 10% occur in India. The latest annual statistics indicate that over 80,000 people are killed on Indian roads. These figures do not reflect the human suffering and social problems by accidents. Nearly three lakh people per year sustain injuries.

There is a need for stringent laws and their enforcement to restrain drinking and driving. Public awareness regarding common causes like drug abuse, exceeding speed limit, breaking the traffic rules and regulations and risky driving should be increased through mass media and educational campaigns. Clearly defined road safety policy, a central coordinating agency, allocation of adequate resources, strict

implementation of proven and effective interventions and reliable information systems are urgently required. Health professionals can contribute in numerous ways and should take a lead role in reducing the burden of road traffic injuries in India and provide educational and training programs for the adolescents.

## MATERIALS AND METHODS

The research design used in this study was single group pre-test and post-test design to evaluate the effectiveness of self-instructional module regarding knowledge and practice on Prevention of Road Traffic Accidents among adolescents. 60 adolescent students in selected colleges in Bangalore City were selected and collected their response. Purposive sampling technique was used to select the samples.

The tool consists of six items of demographic variables (income, age, sex, religion, educational status, previous exposure to preventive methods of road traffic accidents and sources of previous preventive information) of the adolescents in selected colleges in Bangalore City. The structured knowledge questionnaire and practice checklist regarding prevention of road traffic accidents were administered into the subjects after the assessment of the pre-test score. After seven

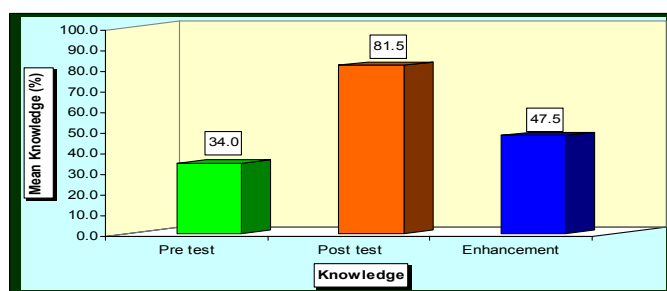
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days of intervention, the investigator administered the knowledge questionnaire and practice checklist to assess the level of post-test knowledge and practice.

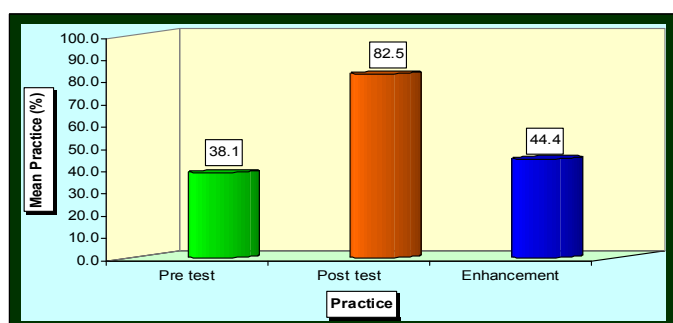
## RESULTS

The analysis and interpretation of data are based on collected data through structured knowledge and practice checklist from 60 subjects. Organization and presentation of the obtained data were entered for tabulation and statistical processing and the result were computed using descriptive and inferential statistics.



Graph 1 Overall Pre-test and Post-test Mean Knowledge on Prevention of Road Traffic Accidents

The enhancement of mean pre-test and post-test knowledge score was (47.5%) and SD of (15.3%). Further, the paired t-test value (24.05\*) shows statistical significance at level of  $P < 0.05$  with df (59), establishing the effectiveness of self instructional module.



Graph 2 Overall Pre-test and Post-test Mean Practice on Prevention of Road Traffic Accidents

The mean enhancement of practice between pre-test and post-test is found to be 44.4% and SD

as 12.5%. However, the paired t-test value to computed as 27.51\* shows statistical significance at  $p < 0.05$  establishing the effectiveness of self-instructional module on prevention of road traffic accidents.

It is evident from the findings that the mean pre-test knowledge and practice scores found to be 34.0% and 38.1% respectively. Further, the post-test mean knowledge and practice scores on prevention of road traffic accidents noticed as 81.5% and 82.5% respectively. It is evident from the result that higher the knowledge of respondents better is the practice observed among adolescents on prevention of road traffic accidents.

## DISCUSSION

The adolescents those who participated in the study, were explained according to their demographic profiles like social class, age, gender, religion, educational status and exposure to preventive education in terms of percentages of the components.

In this research study, adolescents belong to different social class shows different level of knowledge regarding prevention of road traffic accidents as per the percentage of (72.2%- High class) and 70.4%- Middle class). These findings are supported by another study. (Hasselberg M, Laflamme, 2008.

With regard to the adolescents, majority 47 (78.3%) of them had inadequate knowledge ( $\leq 50\%$ ) scores, 13 (21.7%) had moderate knowledge (51-75%) scores and none of them had adequate knowledge ( $> 75\%$ ) score in pre-test on prevention of road traffic accidents.

Among the 60 subjects under study, majority 44 (73.3%) of them had low practice level ( $\leq 50\%$  score), 16 (26.7%) had moderate level of practice (51-75% score) and no one had high level of practice ( $> 75\%$  score).

There is a relationship between knowledge and practice scores of pre-test and post-test regarding prevention of road traffic accidents among adolescents. It is evident from the findings that the mean pre-test knowledge and practice scores found to be 34.0% and 38.1% respectively. Further, the post-test mean knowledge and practice scores on prevention of road traffic accidents noticed as 81.5% and 82.5% respectively. It is evident from the result that higher the knowledge of respondents better is the practice observed among adolescents on prevention of road traffic accidents.

## CONCLUSION

This reaserch revealed that there is a significant difference in knowledge and practice of adolescents reagarding prevention of road traffic accidents after self instructional module. The findings of the study revealed that there is no significant association between knowledge of adolescent students on prevention of road traffic accidents and selected demographic variables like social class, age, religion and educational status.

Table 3 To find out the relationship between knowledge and practice of adolescents regarding prevention of road traffic accidents

	Aspect	Max Score	Response (%)				Correlation Coefficient (r)
			Mean	SD	Mean (%)	SD(%)	
Pre test	Knowledge	24	8.15	3.2	34.0	13.4	+0.418
	Practice	24	9.13	2.8	38.1	11.7	
Post test	Knowledge	24	19.55	2.1	81.5	8.7	+0.605*
	Practice	24	19.80	2.3	82.5	9.5	

\*Significant at 5% level,

This study highlighted that there is a significant association between knowledge and selected variables like gender and exposure to preventive education.

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