A Study to Assess the Knowledge Regarding Prevention of Road Traffic Accidents among Adolescents

Thamarai Selvi P.

Abstract

A study was conducted to assess the knowledge regarding prevention of road traffic accidents among adolescents. The sample of this study comprised of 60 adolescents.Probability Simple random sampling technique in that lottery method was used to draw the sample for the study. Collected data was analyzed by using descriptive and inferential statistics. The findings revealed the post-test mean knowledge score was found higher (81.1%) when compared with pre-test mean knowledge score (47.3%). The pre test mean knowledge score is 17.98 and standard deviation is 3.74. Post test mean knowledge is found to be 30.80 and standard deviation is 3.30. Enhancement is 33.7% and statistical paired 't' test value is 28.12.The statistical paired 't' test indicates that enhancement in the mean knowledge score found to be significant at 5 % level for all the aspects under study.

Keywords: Video assisted teaching; Prevention of road traffic accidents; Adolescents.

Introduction

Over a million of people died from road traffic injuries in globally. Road safety was treated as a transportation issue which is becoming a major health concern worldwide everyday as many as 1, 40,000 people are injured on the world's roads .More than 3000 die and 15,000 are disabled for life.[1] World Health Organization (WHO) and World Bank jointly had issued the report on road traffic injury prevention on World Health Day 2004. Among its findings 3000 people died each day and 75,000 were injured on account of poor road safety. The world report on road traffic accidents were well on their way to become the third leading cause of global death and disability by the year 2020 ahead of malaria, Tuberculosis, Acquired immuno deficiency syndrome.[2]

WHO estimates raise of traffic mortality rate in India is 79% in 2002. By 2020 the road traffic death in India will be increased more than that in 2002.Road accidents are the main cause of death of young men

Author Affiliation: *Lecturer, Naincy College of Nursing, Jeolikote, Nainital, Uttarakhand, India.

Correspondance: Mrs. Thamarai Selvi P., Lecturer, Naincy College of Nursing, Jeolikote, Nainital, Uttarakhand, India.

E-mail: pthamus@gmail.com

worldwide. Of the estimated 195,000 adolescents killed each year in traffic accidents 60% are the boys. Adolescents are especially susceptible to injury when riding mini bikes, snow mobiles, or motorcycles. Motor vehicle accidents are the leading cause of death in adolescent period.[5] Young often tend to be over confident less experienced, run with high speed and use of alcohol makes the worse combination of risk.[3] In India 80,000 persons die in the traffic crash annually. Over 1.2 million are injured seriously and about 300,000 are disabled permanently.[4]

A study was conducted on "Drive way injuries project." The purpose of the study was to raise awareness of drive way safety issues to all residents. The focus was on a public education campaign to increase awareness and affect behaviour change. A family flyer, posters and a door hanger were developed in order to increase aware of the issue and promoting safer family behaviours. Accidents are preventable as they owing to sequence of events. Young people need to be educated regarding risk factors, traffic rules and safety precautions has been aptly said that "If accident is a disease, education is its vaccines."[5]

In view of above investigator felt that the need to do the study among adolescents regarding risk factors, traffic rules and safety precautions. Education and awareness is the best step in the direction of bringing behaviour changes through

effective communication on prevention of road traffic accidents.

Statement of the problem

"A study to assess the effectiveness of video assisted teaching on knowledge regarding prevention of road traffic accidents among adolescents at selected colleges, Bangalore."

Objectives of the Study

1. Assess the existing knowledge scores on prevention of road traffic accidents among adolescents.
2. Assess the post knowledge score on prevention of road traffic accidents among adolescents.
3. Explore the association between the knowledge scores and selected demographic variables.

Conceptual Framework

The conceptual framework of this study was based on Rosentoch's, Becker and Mariman's health belief model.

Materials and Methods

Research Methodology

The investigator has selected quasi experimental research design (one group pre-test post-test).

Research Setting

The setting for the study is St.Theresa PU College, Bangalore.

Population

The accessible population of the present study includes adolescents who are studying in St.Theresa PU College, Bangalore.

Sampling Technique

Simple random sampling technique is a type of probability sampling which was found appropriate for the study. In that lottery method was used to collect data from samples.

Sample Size

The sample size for the study is 60 adolescents.

Sampling Criteria

Inclusion Criteria

- Adolescents between age group of 16-18 years
- Adolescents who are willing participate in the study.
- Adolescents who can speak and read English.

Exclusive Criteria

- Adolescents who are not willing to participate in the study.
- Adolescents who are not available at the time of data collection.

Tools for Data Collection

In the present study the tool consist of 2 parts.

Part-I: socio demographic variables of adolescents.

Part II: structured knowledge questionnaire regarding prevention of RTA.

Method of Data Collection:

Investigator collected the data after getting formal written permission from Principal of St.Theresa PU College, Bangalore and approval was obtained to conduct the study. The participants were informed about the purpose of study and written consent was taken from the participants. Pre test was conducted by administering knowledge questionnaire. On an average each participant took 30 minutes to complete the questionnaire, after video assisted teaching was

administered. Post test was conducted with the same questionnaire after 7 days. The investigator did not face any significant problem and the tool was found reliable.

Data Analysis and Interpretation

The data was collected from adolescents was tabulated, analyzed and interpreted by using descriptive and inferential statistics. Analysis was done based on the objectives and hypothesis of the study.

The demographic characteristics' of the respondents are shown in Table 1.

Table 2 presents the comparison of pre test and post test knowledge.

Table 3 reveals the association of demographic variables.

Table 4 shows the enhancement of knowledge and significance on prevention of road traffic accidents among adolescents before and after VAT. The mean difference is 12.82and SD is 3.52 mean percentage is 33.7% the t- value is 28.12, df value is 59 and p-value is P<0.05.

The first objective of the study was to assess the pre test knowledge scores on prevention of road traffic accidents among adolescents.

In present study out of 60 adolescents 35 (58.3%) had inadequate level of knowledge and 25 (41.7%) had moderate knowledge and none of subjects had adequate knowledge in pre-test. The range before VAT lies between 11-26 the mean value before VAT is 17.98. The SD before VAT is noticed as 3.74, and the mean percentage is found to be 47.3%.

The second objective of the study was to assess the post knowledge on prevention of road traffic accidents among adolescents.

Out of 60 subjects 42(70%) had adequate level of knowledge, 18 (30%) had moderate level of Knowledge and none of the adolescents got inadequate knowledge after VAT on prevention of road traffic accidents. The range after VAT ranges between 22-36. The mean value after VAT is 30.80. The SD after VAT is found to be 3.30 and the mean percentage as noticed to be 81.1%.

**Table 1: Analysis of demographic characteristics of the respondents**

N=60

S. No	Variables	Categories	Frequency	Percentage
1	Age in specific years	16	11	18.3
		17	24	40
		18	25	41.7
2	Sex	Male	29	48.3
		Female	31	51.7
3	Education	PUC I Year	31	51.7
		PUC II Year	29	48.3
4	Type of vehicle which you are using	2 wheeler	39	65
		4 wheeler	3	5
		None of them	18	30
5	Any exposure to information regarding prevention of road accidents	yes	38	63.3
		No	22	36.7
6	If yes source of information (n=38)	Newspaper	11	28.9
		Mass media – TV Radio / Propaganda	14	36.9
		Information from parents / Relations friends	13	34.2

Table 2: Comparison of Pre Test and Post Test Knowledge Level of Adolescents

N=60

S. No	Level of knowledge	Knowledge score	Pre test		Post test	
			Frequency	Percentage	Frequency	percentage
1	Inadequate	Jan-50	35	58.30%	-	-
2	Moderate	51- 75	25	41.70%	18	30.00%
3	Adequate	76-100	-	-	42	70.00%

Figure 1: Shows that Adolescents Level of Knowledge before and after VAT
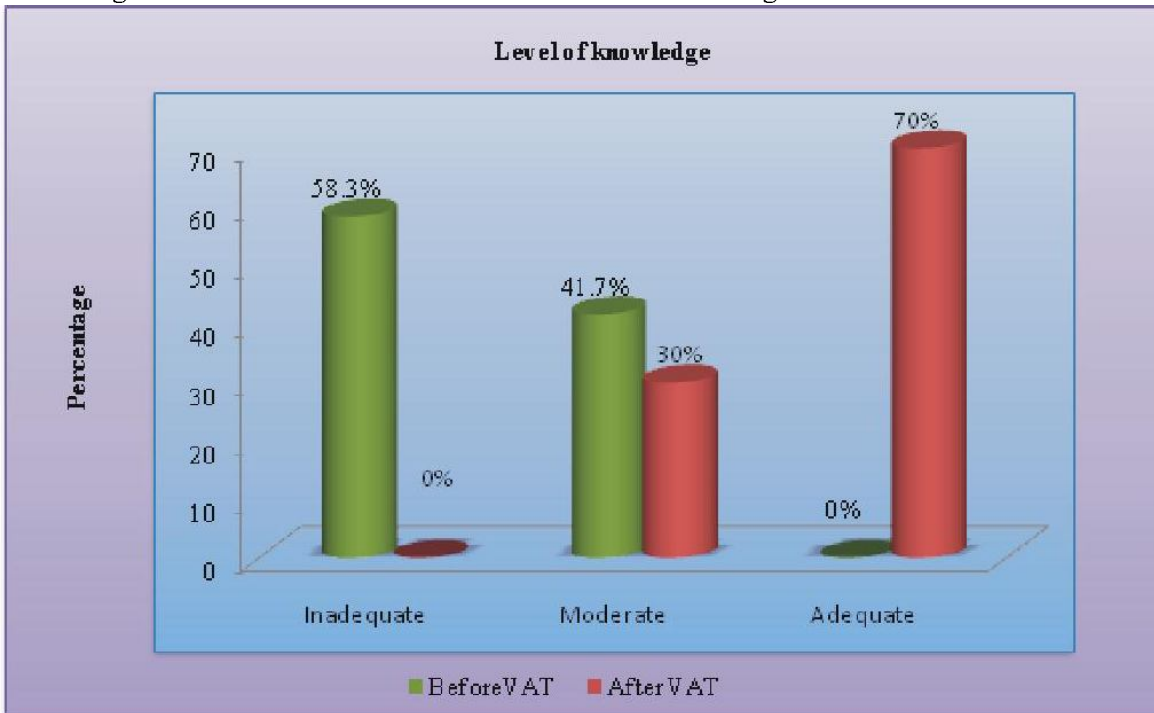
The third objective of the study was to determine the association between the selected demographic variables among adolescents.

An association of selected baseline variables in relation to their knowledge was studied using chi-square test. The analysis revealed that there is a significant association established between age and post test knowledge level and remaining variables were found to be non significant in post test, hence that stated research hypothesis "there is a significant association between the post test knowledge score of adolescents on prevention of road traffic accidents

Recommendations

Based on the findings of the study following recommendations are made:

• A similar study can be replicated on a large sample with different demographic character-istics.

• A similar study may be replicated with a

control group.

• May be with replicated on different samples.

• Public awareness shall be created by mass media such as news paper,magazine, TV and internet and also by consulting seminars and workshops.

Conclusion

Over a million of people died from road traffic injuries in globally. Adolescents are especially susceptible to injury when riding mini bikes, snow mobiles, or motorcycles. Motor vehicle accidents are the leading cause of death in adolescent period. The study was conducted to find out the effectiveness of video assisted teaching on prevention of road traffic accidents among adolescents in selected colleges; Bangalore. It is concluded that video assisted teaching is very effective among adolescents in

Table 3: Association between Knowledge on Prevention of Road Traffic Accidents and Demographic Variables of Adolescents

N= 60

S. No	Demographic variables	Categories	Adolescents		Knowledge on prevention of road traffic accidents				Chi-square value
					≤ `Median		>Median		
			No	%	No	%	No	%	
1	Age (yrs)	16	11	18.3	8	25	3	10.7	2.055, df=2, NS
		17	24	40	12	37.5	12	42.9	
		18	25	41.7	12	37.5	13	46.4	
2	Sex	Male	29	48.3	12	37.5	17	60.7	4.22, df=1, S
		Female	31	51.7	20	62.5	11	39.3	
3	Education	PUC (I year)	31	51.7	18	56.3	13	46.4	0.577 df=1, N S
		PUC (II year)	29	48.3	14	43.8	15	53.6	
			-	-	-	-	-	-	
4	Type of vehicle	2 wheeler	39	65	18	56.3	21	75	2.308, df=2, NS
		4 wheeler	3	5	2	6.3	1	3.6	
		None of them	18	30	12	37.5	6	21.4	
5	Information regarding prevention of road accidents	Yes	38	63.3	21	65.6	17	60.7	0.155, df=1, NS
		No	22	36.7	11	34.4	11	39.3	
6	If yes source of information	Newspaper	11	28.9	6	31.6	5	26.3	1.536, df=2, NS
		Mass media – TV Radio / Propaganda	14	36.9	8	42.1	6	31.6	
		Information from parents / Relations friends	13	34.2	5	26.3	8	42.1	

Table 4: Enhancement of Knowledge and Significance on Prevention of Road Traffic Accidents among Adolescents before and after VAT

S. No	Variable	Maximum score	Mean difference	SD	Mean %	t-value	df	p-value
1	Knowledge	38	12.82	3.52	33.7	28.12	59	P<0.05

improving knowledge about prevention of road traffic accidents.

References

1. Park JEA. Text book of preventive social medicine.18th edition. Jabalpur: Banarsidashanoal Publishers; 1997, 325-329.

2. Carol Bellamy. General Assembly of World health organization on road safety issues. 58th General Assembly. 2003.

3. Sunder Lal. Community medicine. 2nd edition. India: CBS Publishers; 2009, 584-589.

4. Dorothy Marlow. Text book of pediatric nursing.6th edition. India: Elsevier Publication; 2009, 1132-1133.

5. Adnan A Hyder. Road traffic injuries in India. *Scandinavian Journal of Public Health.* 2009; 34(1).