Available online at http://www.ijims.com
ISSN: 2348 – 0343

Study to evaluate the effectiveness of Video Assisted Teaching on Road Safety Measures among students in selected schools of Rohtak, Haryana

Heaven Dahiya[1*], Lokanathan V[2], Sudesh Rani[1]

1. College of Nursing, Pt. B D Sharma Post Graduate Institute of Medical Sciences,Haryana, India
2. Dept. of Biochemistry, Pt. B D Sharma Post Graduate Institute of Medical Sciences, Haryana, India

*Corresponding author: Heaven Dahiya

Abstract

A Pre-Experimental One Group Pre-test Post-test study was conducted to evaluate the Effectiveness of Video Assisted Teaching on Road Safety Measures among 120 school students from 9th and 10th standard from selected schools of Rohtak, Haryana by using purposive sampling technique. Structured knowledge questionnaire and rating attitude scale were used to assess the knowledge and attitude of school students. The findings of the study revealed that the mean post test scores were significantly higher than mean pre scores. There was no association found between the selected demographic variables with the knowledge and attitude scores of 9th and 10th standard students regarding road safety measures.

Keywords: Video Assisted Teaching, Road Safety Measures, Students, Schools

Introduction

"It is better to lose one minute in life….then to lose life in a minute"

According to The Global status report on road safety 2015, reflecting information from 180 countries, indicates that worldwide the total number of road traffic deaths has plateaued at 1.25 million per year, with the highest road traffic fatality rates in low-income countries. Only 28 countries, representing 416 million people (7% of world population) have adequate laws that address all five behavioral risk factors (speed, drink driving, helmets, seat belts and child restraints). In India, the motor vehicle population is growing at a faster rate than the economic and population growth. Road accidents have earned India a dubious distinction. With over 130,000 deaths annually, the country has overtaken China and now has the worst road traffic accident rate worldwide (National Crime Records Bureau Report, 2010)

In India, Every 10th bed in the hospital is occupied by an accident victim.

Haryana ranks no 10 in the country as far as road mishaps are concerned. Around 1100 road accidents take place every year in Haryana (State Traffic Police Report, 2011). Road traffic accidents are a human tragedy. They involve high human suffering and socio economic costs in terms of premature death, injuries, loss of productivity and so on. They are one of the main causes of death and injury to children of school age. Accidents tragically are often due to ignorance, carelessness, thoughtlessness and over confidence. The consequences of accident affect seriously the children's growth and development, interferes in their studies and future.

"Teach Children how they should live, they will remember it all their lives"

Aims and Objectives

To assess the knowledge and attitude of 9th and 10th standard students regarding road safety measures

To evaluate the effectiveness of video assisted teaching on road safety measures.

To associate selected demographic variables with the knowledge and attitude scores of 9th and 10th standard students regarding road safety measures.

Materials and Methods

The present study was conducted to evaluate the Effectiveness of Video Assisted Teaching on Road Safety Measures among students in selected schools of Rohtak, Haryana. Pre Experimental (One Group Pretest Posttest) research design was used in the study using purposive sampling technique and sample size was 120. Data was collected by structured questionnaire and rating attitude scale regarding knowledge and attitude of 9th and 10th standard students regarding road safety measures in Kendriya Vidhalaya and Swami Nityanand School, Rohtak, Haryana in the month of January and February 2015. Descriptive and inferential statistics were employed to analyze the data.

Observations

Demographic Variables		Demographic Variables	Frequency	%
Age (in years)	a.	13-14	58	48.3%
	b.	15-16	62	51.6%
Sex	a.	Male	54	45%
	b.	Female	66	55%
Standard/ Class	a.	9th Standard	42	35%
	b.	10th Standard	78	65%
Type of school	a.	Government school	76	63.3%
	b.	Private school	44	36.6%
Parent's Education	a.	Graduate	73	60.8%
	b.	12th Pass	33	27.5%
	c.	10th Pass	11	9.16%
	d.	Primary Education	3	2.5%
Parent's Occupation	a.	Government Job	81	67.5%
	b.	Private Job	39	32.5%
Parent's Income	a.	High Economic Status	12	1%
	b.	Middle Economic Status	85	70.8%
	c.	Low Economic Status	23	19.16%
Ever attended any Educational program on Road Safety Measures	a.	Yes	81	67.5%
	b.	No	39	32.5%

Results

The Study articulated that the difference among Mean Post Test & Pretest Knowledge Score is 12.63 & in Attitude, it was 5.08. The 'Z' Value calculated was 2.17 & 2.44 where as 'Z' Value tabulated at 0.05 level of significance (P Value) was 2 which indicates that the 'Z' calculated was found to be greater than 'Z' Value tabulated. Hence, null hypothesis was rejected and Video assisted teaching was found to be effective.

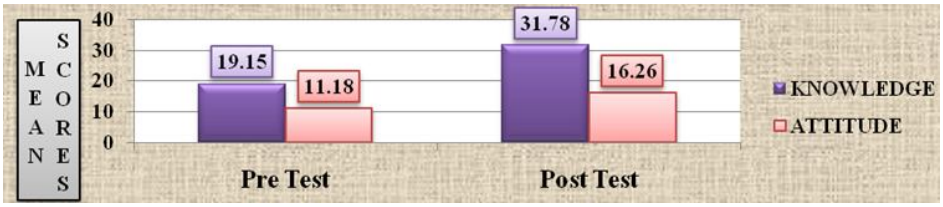

Figure 1- Pre-Post Test Knowledge and Attitude Mean Scores of Study Subjects

Figure 1 represents the mean of knowledge and attitude scores of study subjects before and after administration of Video Assisted Teaching i.e. Pre-Post Test Mean Scores.

Table 1: Mean, Range and SD of knowledge and attitude scores regarding Road Safety Measures

COMPONENTS	MAX. SCORE	RANGE	MEAN	SD	SE	Z_{Cal}	P Value	Z_{Tab}
Pre test scores (K)	40	31-8 = 23	19.15	6.11				
Post test scores (K)	40	40-20 = 20	31.78	5.92	5.88	2.17	0.05	2
Pre test scores (A)	20	16-8 = 8	11.18	2.3				
Post test scores (A)	20	20-11 = 9	16.26	2.07	2.08	2.44	0.05	2

Table 2: Mean and Chi Square of knowledge and attitude scores regarding road safety measures according to selected demographic variables

A. **AGE**	Frequency	Scores		Mean (K)	Mean (A)	χ^2	Df
		Knowledge	Attitude				
a) Male	54	2581	875	47.79	16.2	**0.009**^{NS}	1
b) Female	66	3195	1077	48.4	16.31		
B. **TYPE OF SCHOOL**							
a) Government School	82	4012	1335	48.92	16.28	**0.69**^{NS}	1
b) Private School	38	1760	614	46.31	16.15		
C**. EVER ATTENDED ANY EDUCATIONAL PROGRAM ON ROAD SAFETY MEASURES**							
a) Yes	81	3190	1309	48.27	16.16	**0.25**^{NS}	1
b) No	39	1866	643	47.8	16.48		
D. **PARENT's OCCUPATION**							
a) Government Job	81	3975	1320	49	16.2	**0.94**^{NS}	1
b) Private Job	39	1801	632	46.17	16.2		
E. **PARENT's EDUCATION**							
a) Graduate	73	2315	1186	31.7	16.2	**3.47**^{NS}	1
b) 12th	33	1030	536	31.12	16.24		
c) 10th	11	365	176	29.9	16		
d) PE	3	104	54	34.6	18		
F. **PARENT's INCOME (Economic Group – Annual Income)**							
a) High (> Rs 3Lac)	12	372	190	31	15.8	**0.197**^{NS}	1
b) Middle (Rs 1-3Lac)	85	2745	1396	32.2	16.42		
c) Low (< Rs 1Lac)	23	700	368	30.43	16		

In table 2, χ^2 value for 1 degree of freedom was 3.84 at $p<0.05$ level of significance and the calculated 'χ^2' value is less than the tabled value among all selected demographic variables (Age, Sex, Standard/ Class, Type of School – Government/ Private School, Parent's Education, Parent's Occupation & Income, Ever attended any educational program on Road Safety Measures) and knowledge and attitude scores of 9th and 10th standard students regarding road safety measures. The difference was found to be statistically non significant in all cases.

Discussion

Cognitive processes taking place in an adolescent's brain could affect their risk of road traffic crash as young drivers. Through the use of brain-imaging techniques, neurobiological research conducted over the past decade has found that parts of the frontal lobe-in particular the prefrontal cortex which governs judgement, decision-making, reasoning and impulse control-appears not to fully mature until the age of 20-25 years. While research linking this new evidence on brain development directly to driving has yet to be undertaken, these findings provide some insight into the biological mechanisms that may put many young at risk.

Findings in the present study revealed that the difference was found to be statistically non significant among all selected demographic variables and knowledge and attitude scores of 9^{th} and 10^{th} standard students regarding road safety measures. The awareness regarding road safety was almost same in both government and private school as well as in males and females students (H. M. Swami et al., 2009). The association of 'at risk' behavior regarding road safety with various socio-demographic factors was explored. No statistically significant association was observed with the type of school attended (Sharma R et al., 2007). Road safety should be taught from a very early. Before allowing the teenagers to drive unsupervised by an adult, make sure that that the teenager is competent to drive. The teenager should not be allowed on the roads with motor vehicles until the effective training has taken place. School Health Nurse must encourage school authority to enroll road safety education as a part of school curriculum. Educational programmes should be conducted among the teenagers for the promotion of their health and safety in the road environment.

References

1. Gield J. Structural magnetic resonance imaging of the adolescent brain. Annuals of the New York Academy of Sciences. 2004; 1021:77-85.
2. Violence and Injury Prevention and Disability. Global status report on road safety 2015. Available from: http://www.who.int/violence_injury_prevention/road_safety_status/2015.
3. National Crime Records Bureau Report 2010-India has the highest number of road accidents in the World. National Crime Records Bureau; 2010. [Online]. 2010 [cited 2010 April 29]. Available from: http://www.dw.de/india-has-the-highest-number-of-road-accidents-in-the-World/a-5519345-1.
4. Road Traffic Injuries. WHO Media Centre. Factsheets. Available from: http://who.int/mediacentre/factsheets/fs358/en/.
5. Sharma Rahul, Grover Vijay L, Chaturvedi S. Risk behavior related to road safety among adolescent students. Department of Community Medicine. New Delhi. 2007; 656-662.
6. State Traffic Police Report 2011-47000 dead in Haryana road mishaps last year. Chandigarh: The Indian Express Limited; 2011. Available from: http://www.archieve.indainexpress.com/news/47000-dead-in-haryana-road-mishaps-last-year/79543412.
7. Swami H.M, Puri S, Bhatia V. Road safety awareness and practices among school children of Chandigarh. Indian Journal of Community Medicine. 2009; 31(3):200-207.