"A STUDY TO ASSESS THE KNOWLEDGE REGARDING ROAD SAFETY AMONG ADOLESCENTS FROM SELECTED JUNIOR COLLEGES IN MUMBAI"

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Abstract:

Background: A road traffic accident (RTA) is any injury due to crashes originating from, terminating with or involving a vehicle partially or fully on a public road. It is projected that road traffic injuries will move up to the third position by the year 2020 among leading causes of the global disease burden. They are considerable economic losses to victims, their families, and to countries as a whole. Aim and objective: A study was planned to assess the knowledge of road safety among adolescents. and to find out an association between the knowledge of adolescents regarding road safety with selected demographic variables. Material and method: A Quantitative approach and survey design used for this study. The study was conducted on three hundred adolescents of junior colleges. The data gathering technique used was self-reporting and non-probability convenient sampling. Results: The analysis and interpretation revealed that it was observed that there is association between knowledge score of adolescents and the 3 colleges. It was observed that there is association between knowledge score of adolescents and the gender. It was observed that there is association between knowledge score of adolescents and the class in which they are studying. i.e., 11th class and 12th class. Conclusion: The finding of the study showed that, the knowledge regarding road safety among adolescent was good except some adolescent gave the wrong answer. It was also observed that female adolescents gave more correct response than male adolescents. Adolescents are more curious to finding out the correct answers. Many of them would like someone to come and teach them correct concepts of various health related topics. Knowledge of the adolescent was more may be because of the more exposure to social media.

Index Terms – Study, Assess, Road Safety, Adolescent, Junior College

I. Introduction

As children grow and their world extends beyond the home and out into local roads, they are exposed to hazards and risks. Despite the fact that children use roads as pedestrians, cyclists, motorcyclists and vehicle passengers, the road environment is rarely developed with consideration for their needs. Some children work, play or live on the road, and this exposure, along with other risk factors inherent to childhood, makes them particularly vulnerable in traffic. The result is millions of fatal or disabling injuries each year. In most countries, road traffic injuries are one of the top two causes of death from unintentional injury, with the highest rates among 15–19 year olds. Children, being less aware of danger, and are one of the most vulnerable groups. Younger children are more vulnerable indoors, while older ones are more at risk outdoors. Middle school children, roughly spanning ages 11 to 13, vary tremendously in their levels of maturity. Middle school students are interested in absolutely everything for half an hour. As per WHO, unintentional injuries are a leading cause of death among children. The unintentional injuries include accidents such as falls, collisions, heat related injuries, burns and scald, poisoning and ingestion accidents, cuts and abrasion and drowning. This challenges the children's morbidity and mortality. According to WHO report of 2008, the leading cause of childhood injury and death is road accidents which kill 2,60,000, drowning1,75,000, burns 96,000, falls 47,000 occur every year globally and the injured were around 10 million. Road traffic injuries alone ranked as the number one cause of disease burden among children between 5 and16 years.

II. Background of study

A road traffic accident (RTA) is any injury due to crashes originating from, terminating with or involving a vehicle partially or fully on a public road. It is projected that road traffic injuries will move up to the third position by the year 2020 among leading causes of the global disease burden. They are considerable economic losses to victims, their families, and to countries as a whole.

According to WHO, the death rate due to RTAs Road from 16.8 / 100,000 in 2011 to 18.9 / 100,000 in 2014. Number of deaths and injuries due to RTAs in India between the years 2005 to 2014 raised by 5.8% and 2.4% respectively. In the year 2014, 1, 41,526 RTAs were reported in India. A total of 4, 81,874 traffic accidents were reported in 53 cities during 2014, In 4, 81,874 traffic accidents caused injuries to 4,72,523 persons and 1,17,416 deaths. The Global status report on road safety 2013 indicates that worldwide the total number of road traffic death remain unacceptably high at 1.24 million per year. Road traffic injuries are the leading cause of death among young people. Aged 15-29 years. Children, pedestrians, cyclists and older people are among the most vulnerable of road users constituting half of those dying on the world's roads. Majority of the world's fatalities on the roads occur in low-income and middle- income countries, even though these countries have approximately half of the world's vehicles. Most of road accidents were due to over-speeding, accounting for 36.8% of total accidents, which caused 48,654 deaths and left 1, 81,582 persons injured. Dangerous careless driving or overtaking caused 1, 37,808 road accidents which rendered 48,127dead and 1, 38,533 persons injured during 2014. Besides 3.2% of road accidents were due to poor weather conditions.

Statement of Problem: A study to assess the knowledge regarding road safety among adolescents from selected junior colleges in Mumbai.

Objectives of study:
1. To assess the knowledge of road safety among adolescents.
2. To find out an association between the knowledge of adolescents regarding road safety with selected demographic variables.

Assumptions:
1. Adolescents may have some knowledge regarding road safety.
2. Knowledge of adolescents regarding road safety may differ from individual to individual.

Delimitations:
This study will be delimited to the adolescents in the age group of 15-18 years.

III. Research Methodology:

Quantitative research is the systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical or computational techniques. In this study researcher gathers information from the sample by using structured questionnaires to assess the knowledge regarding road safety among adolescents, the results of which can be depicted in the form of numerical.

3.1 Population and Sample:
The study was conducted among 300 adolescents from selected junior colleges.

3.2 Data and Sources of Data

Data was collected by using non-probability convenient sampling, and the self-reporting data gathering technique was used. The tool was a structured questionnaire on the knowledge related to road safety.

3.3 Theoretical framework

In this study knowledge regarding road safety is assumed to be known to all adolescents yet there is high incidence of road traffic accidents. Therefore, the researcher desired to assess the existing knowledge among adolescent so as to identify the extend of correct knowledge among them. This would help to take the appropriate action to correct the knowledge related to road safety. This could be elicited through the survey method thereby providing the health personnel awareness of the adolescent's knowledge. Conceptual framework for this study was derived from the Ernest Hemingway Iceberg theory, "Hemingway said that only the tip of the iceberg showed in fiction the reader will see only what is above the water –but the knowledge that you have about your character that never makes it into the story act as the bulk of the iceberg. And that is what gives your story weight and gravitas." Hemingway's iceberg theory highlights the symbolic implications of art. He makes use of physical action to provide an interpretation of the nature of man's existence practice. It can be convincingly proved that, while representing human life through fictional forms, he has consistently set man against the background of his world and universe to examine the human situation from various points of view.

IV. Results and Discussion
TABLE 4.1: DISTRIBUTION OF THE SAMPLE WITH REGARDS TO THEIR DEMOGRAPHIC VARIABLES

N= 300

Sr. No	Demographic variables	F	%
1	A) Ramchandra M. Bhatt High School & Junior College. B) Dr. Shirodkar High School & Junior College. C) Social Service League High School & Junior College.	87 83 130	29 27.6 43.3
2	**Age in Year** a) 15 years b) 16 years c) 17 years d)18 years	 6 86 182 26	 2 28.6 60.6 8.6
3	**Gender** a) Male b) Female	 157 143	 52.3 47.6
4	**Class** a) F.Y. BA b) 11th c) 12th	 20 170 110	 6.6 56.6 36.6

The above **Table 4.1** highlights the demographic characteristic of the study population.

College code: The table depicts those 87(29%) adolescents were from College 'A'. 83(27.6%) Adolescents were from College 'B'. 130(43.3%) from College 'C.'

Age: It was noted that six samples (2%) belong to the age group of 15 years, 86 samples (28.6%) were in the age group of 16 years,182 (60.6%) were in the age group of 17 years and 26 samples (8.6%) were in the age group of 18 years.

Gender: It was noted that 157(52.3 %) were male, and 143 (47.6%) were female.

Class: It was observed 20(6.6%) were from F.Y.BA, 170 (56.6%) from 11th standard and 110 (36.6%) from 12th standard.
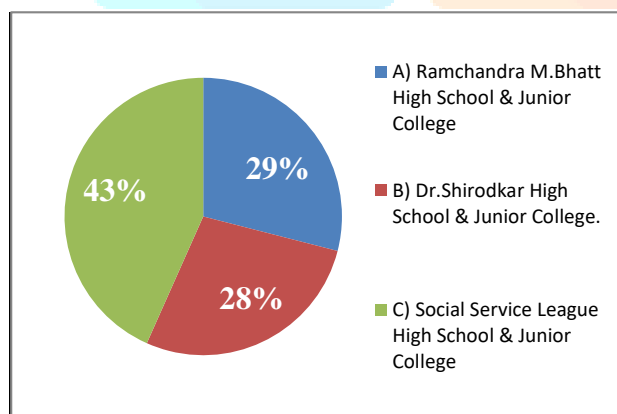

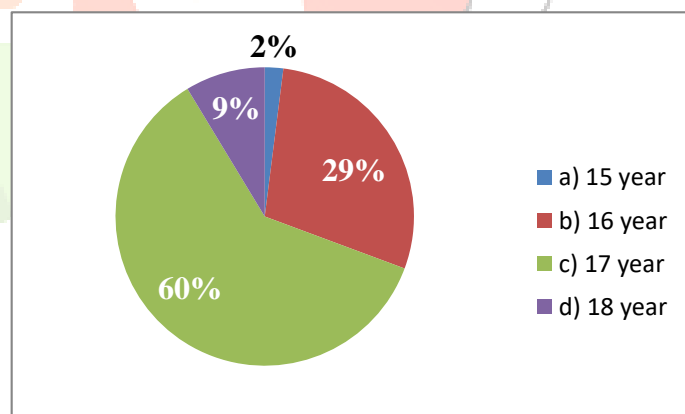**Figure: 4.1 Distribution of sample according to their college codes**

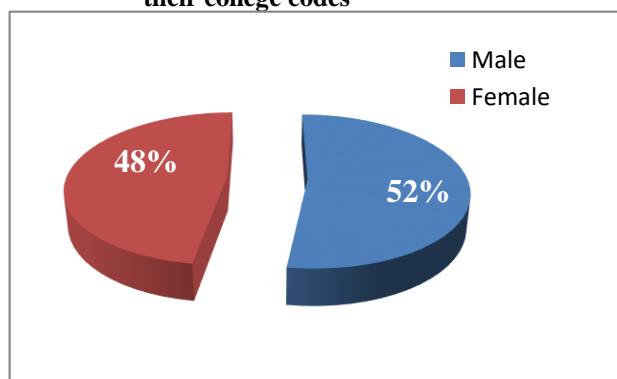**Figure: 4.2 Distribution of sample according to age**

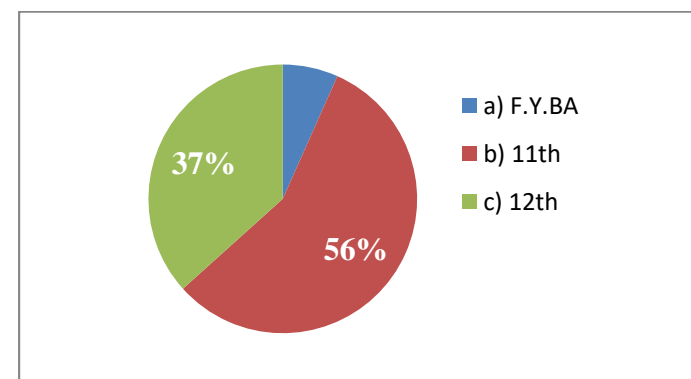**Figure: 4.3 Distribution of sample according to gender**

Figure: 4.4 Distribution of sample according to class

TABLE – 4.2 ASSOCIATION BETWEEN KNOWLEDGE SCORE AND COLLEGE CODE

N= 300

Sr. No	VARIABLES COLLEGE	N	M	SD	SED	't'-VALUE Table	Calculated	SIGNIFICANCE
1	CODE A	87	13.8	3.44	0.47	2.326	3.91	Significant
	CODE B	83	15.66	2.63				
2	CODE B	87	13.8	3.44	0.41	2.326	4.69	Significant
	CODE C	110	17.63	3.059				
3	CODE A	83	15.66	2.63	0.46	2.326	8.22	Significant
	CODE C	110	17.63	3.059				

Level of significance at 0.01   df=298

In the above **table 4.2**, the calculated value of 't' of college 'A' and 'B' was 3.91 which was greater than the table value(t=2.326) at 0.01 level of significance. Hence H_1 was accepted and H_{01} was rejected which means there is association between knowledge score of adolescences and between the college 'A' and 'B'. The calculated value of 't' of college 'B' and 'C' was 4.69 which was greater than the table value (t=2.326) at 0.01 level of significance. Hence H_2 was accepted and H_{02} was rejected which means there is association between knowledge score of adolescences and between the college 'B' and 'C'. The calculated value of 't' of college 'A' and 'C' was 8.22 which was greater than the table value(t=2.326) at 0.01 level of significance. Hence H_3 was accepted and H_{03} was rejected which means there is association between knowledge score of adolescences and between the college 'A' and 'C'. Hence it can be concluded that there is association between the knowledge score of the adolescent from the selected colleges.

TABLE 4.3 ASSOCIATION BETWEEN KNOWLEDGE SCORE AND GENDER

N= 300

VARIABLES	GROUP	N	M	SD	SED	't' VALUE Table	Calculated	SIGNIFICANCE
GENDER	FE	143	16.66	3.43	0.39	2.326	3.20	Significant
	MALE	157	15.39					

Level of significance at 0.01   df=298

In the above **table 4.3,** the calculated value of 't' was 3.20, which was greater than the table value (t=2.326) at 0.01 level of significance. Hence H1 was accepted and H0 was rejected. This means there is association between knowledge score and gender of the adolescences

TABLE 4.4 ASSOCIATION BETWEEN KNOWLEDGE SCORE AND CLASS

N=300

VARIABLES	N	M	SD	SDD	SED	't'-VALUE Table	Calculated	SIGNIFICANCE
11th class	170	14.71	3.20	3.16	0.36	2.326	8.025	Significant
12th class	130	17.67	3.11					

Level of significance at 0.01   df= 298

In the above **table 4.4** the calculate value of 't' was 8.025 which was greater than the table value (t=2.326) at 0.01 level of significance. Hence H_1 was accepted and H_0 was rejected which means there is association between knowledge score and class in which the adolescent is studying.

V. Acknowledgment

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