

Effectiveness of Instructional Approach on Knowledge Regarding Prevention and Management of Road Traffic Accident among Adults in Selected Areas of Gonda

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Abstract

This study entitled “study to assess the effectiveness of instructional approach on knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda” submitted in the year 2024.

Aims: The objectives are to assess the knowledge level on prevention and management of road traffic accident among adults in selected areas of Gonda; to assess the effectiveness of instructional approach on knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda; to determine the association between the knowledge with the socio-demographic variables.

Hypothesis: There is a significant association between the level of knowledge with socio demographic variables.

Design and setting: Quantitative approach quasi experimental one group pretest post-test design was used.

Methods and materials: Simple random sampling technique was used to select 50 participants. Structured questionnaire was used to collect the data. Teaching program was conducted on prevention and management of Road traffic accident and the posttest was done on the 7th day. The results of this study revealed that there was a significant knowledge improvement ($t=29.25$, $p<0.05$) after the instructional approach.

Keywords: Instructional approach; Knowledge; Prevention; Management of road traffic accidents.

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INTRODUCTION

An estimated 1.19 million people lose their lives in traffic accidents every year. For children and young adults aged 5 to 29, traffic related injuries are the main cause of death. Despite owning over 60% of the world's automobiles, low and middle-income nations account for 92% of all traffic deaths worldwide. Pedestrians, cyclists, and motorcyclists are among the vulnerable road users that account for almost half of all traffic fatalities.¹

Students' knowledge of preventing road traffic accidents (RTAs) was evaluated using a cross-sectional analytical research design and a quantitative approach. At the Islamic University of Science and Technology, data was gathered with an emphasis on students from different departments. 613 participants made up the sample size, which was determined by using a multi-stage cluster level sampling procedure. According to the study, 77% of university bound students had a moderate understanding of road safety, which might be improved. Participants answered around 54% of the questions correctly on average, according to the mean knowledge score of 16.18 out of 30. Notably, knowledge levels were strongly influenced by educational attainment, but there were no discernible relationships between road safety and variables like age, gender, family status, economic position, or area.²

The purpose of this project is to raise college students' awareness of traffic accidents. Based on college students' awareness of traffic accidents, a self-structured questionnaire was created. One hundred college students made up the study population, and the questionnaire was disseminated via an online survey web link. After being gathered, the data was statistically examined. Approximately 97% of college students were aware of traffic incidents, according to the study. We can draw the conclusion from this study that more awareness campaigns and seminars about traffic laws, speeding, drunk driving, using cell phones while driving, and the dangers of traffic accidents should be held in educational institutions.³

A cross-sectional descriptive study was conducted to evaluate RTA victims' knowledge of risky driving practices. In addition to gathering information about accidents and injuries, a knowledge quiz on risky driving behavior was created. Just 5% of the 60 RTA victims knew enough about risky driving practices, and 50% of them suffered from different kinds of fractures as

a result of their actions. Particular attention must be paid to raising public understanding of traffic laws and safe driving practices. Programs should be designed to monitor and control risk-driving behaviors and make the required adjustments. These incidents can be prevented by strict oversight of licensing processes, helmet use, and sanctions.⁴

A study looks at the social, demographic, economic, and other pertinent factors that affect how informed and knowledgeable victims of traffic accidents are about the laws. 200 victims of road traffic accidents (RTAs) in Khulna City, Bangladesh, were surveyed and interviewed in-person to gather data. According to the findings, victims who have received training, have a better level of education, have access to the media, and have been in a traffic accident before are more likely to be aware of accidents and have learnt the necessary traffic laws. Compared to victims who live in cities or work in highly skilled occupations, people who work in low-skilled occupations or reside in rural regions are less likely to be aware of traffic laws. Furthermore, men are probably more aware of RTAs than women.⁵

A cross-sectional survey was conducted and 150 students ages between 13 to 17 years participated in this study from Jaipur district of Rajasthan. By using a structured multiple choice questionnaire and checklist the data was collected. The result depicted those nine adolescents (6%) had poor knowledge, 103 (68.7%) had average and 38 (25.3%) had good knowledge about traffic safety rules and regulations. With regards to practice, 6 (4%) had unsatisfactory practice, 108 (72%) had partially satisfactory and 36 (24%) had satisfactory practice.⁶

The study's objective was to evaluate primary school students in a rural community's understanding and adherence to traffic safety laws. 50 samples from a rural community's elementary school participated in the study, which was carried out using a cross-sectional research design. Out of fifty samples, sixteen (32%) had inadequate knowledge, twenty (40%) had relatively adequate knowledge, and fourteen (28%) had adequate understanding of road traffic legislation. Concerning the application of traffic laws Twenty-two (44%) of the 50 samples had bad practice, twenty-four (48%) had good practice, and four (8%) had outstanding practice. According to the study's conclusions, few students in primary school possess awareness of traffic laws, while others lack this expertise.⁷

Problem statement

A Study to assess the Effectiveness of

instructional approach on knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda.

Objectives of Study

1. To assess the pretest and posttest knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda.
2. To assess the effectiveness of instructional approach on knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda.
3. To determine the association between the knowledge with the socio demographic variables.

HYPOTHESIS

H₁: There is a significant difference between pretest and posttest on knowledge regarding prevention and management of road traffic accident among adults in selected areas of Gonda.

H₂: There is a significant association between the levels of knowledge with socio demographic variables.

Assumptions

Adults may have inadequate knowledge regarding prevention and management of Road traffic accident.

MATERIAL METHOD

Research Approach

Quantitative approach, Quasi Experimental pretest posttest design was adopted in this study.

VARIABLES

Independent variable: Instructional approach regarding prevention and management of Road traffic accident.

Dependent variable: Knowledge of adults regarding prevention and management of Road traffic accident.

Demographic variables: Age, gender, marital status, education, occupation and previous source

of knowledge.

Sample size

Sample size consisted of 50.

Sampling Technique

Simple random sampling technique was utilized to select the samples.

Setting

Adults were selected from Sumerpur, Gonda.

Criteria for sample selection

Inclusion criteria:

1. Subjects those who are in the age group between 21-50 years.
2. Both male and female are included.

Exclusion Criteria

1. Subjects those who are not willing to participate.
2. Subjects those who are not available on the day of data collection.

Description of tool

The instrument used in this study contains 2 sections which are described before.

Part I: It consists of demographic variables age, gender, marital status, education status, occupational status and previous source of information.

Part II: Knowledge questionnaire regarding prevention and management of Road traffic accident and it consists of 30 questions.

Score interpretations: Total score 30 each correct answer given the score as '1' and the wrong answers scored as '0'. Level of knowledge was grouped into following categories.

- Inadequate: 0-10
- Moderate: 11-20
- Adequate: 21-30

Content validity

The tool was validated by experts in the different fields along with the objectives of the study. The tool which was used for the study was structured questionnaires, the reliability and the feasibility was tested through pilot study by using split half method. The tool was found to be reliable and feasible.

Procedure for data collection

Before data collection, proper permission was obtained and consent obtain from participants. Data was collected for 15 - 20 minutes through questionnaire about prevention and management of Road traffic accident. The total number of adults was divided into two groups. Each consists of 25 adults. At the starting teaching schedule pretest was conducted with self structured questionnaire. Then each day education was given with the help of LCD projector for 45 minutes. Doubts were cleared at the end of teaching. After 7 days, reassessment was done with the same set of questionnaire. The collected data was tabulated and analysed using descriptive and inferential statistics.

Results and interpretation

Table 1: Frequency and percentage distribution of socio demographic variables of adults

Demographic Data	n=50	
	F	%
Age		
21-30 Years	22	44
31-40 Years	25	50
41-50 Years	3	6
Gender		
Male	42	84
Female	8	16
Marital Status		
Married	44	88
Unmarried	6	12

Education Status

No Formal Education	19	38
Higher Secondary Education	28	56
Degree and Others	3	6

Occupation

Farmer and Daily Wages	15	30
Private Employee	32	64
Government Employee	3	6
Own Business	0	0

The above table explains that, Out of 50 samples, maximum that is 50 % belong to 31-40 years, most of them 84% were males and 88% of participants were married. According to education status, many of them were completed up to higher secondary education 56% and 64% adults were private employees.

Table 2: Frequency and percentage distribution of knowledge level on prevention and management of road traffic accidents

Knowledge Score	Pre-test		Post-test	
	f	%	f	%
Inadequate	12	24	0	0
Moderate	38	76	6	12
Adequate	0	0	44	88

The above table reveals that in pre-test, 24% had inadequate knowledge, 76% had moderate knowledge and none of them had adequate knowledge regarding prevention and management of road traffic accidents. After education, 88% had adequate and 12% had moderate knowledge and none of them had inadequate knowledge.

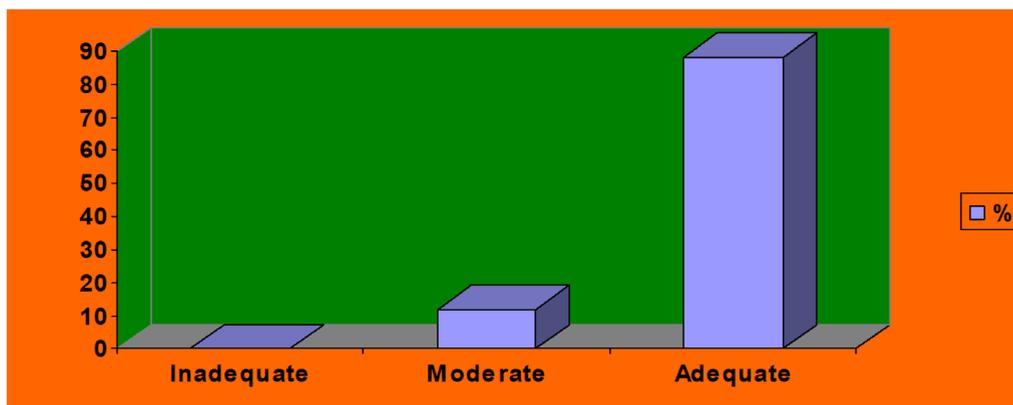


Fig. 1: Adults Knowledge level in post-test on prevention and management of road traffic accidents

The above chart represents the post-test and management of road traffic accidents. knowledge level of the adults regarding prevention

Table 3: Effectiveness of the Instructional approach on knowledge regarding prevention and management of Road traffic accidents

Variable		Mean	SD	't' value	
				Calculated value	Table value
Knowledge on prevention and management of road traffic accident	Pre test	15.48	4.05	29.25	1.676
	Post test	26.80	3.27		

The effectiveness of instructional approach was measured using 't' test. The calculated value for pre and post-test knowledge is 29.25 and the tabulated value is 1.676 at the level of (p<0.05) significance. Hence, there is a significant increase in the knowledge of the adults after the education.

DISCUSSION

The findings of this study explained that the age of the adults ranged from minimum of 21 years to a maximum of over 50 years. Most of them 26 (50%) were in the age group between 31-40 years, maximum participants were male 42 (84%). According to educational status, 28 (56%) were studied up to higher secondary education, only 3 (6%) have completed degree and other courses, participants were mostly married that is 44 (88%). Based on the occupation, 32 (64%) were working in private sector, 15 (30%) were farmers and only 3 (6%) were in Government job.

This study finding also reveals that after intervention, 88% had adequate and 12% had moderate knowledge and none of them had inadequate knowledge. It also shows that there was an increase in the knowledge level during post-test, producing a mean score of 26.80 which is around 89% of adequate knowledge which was achieved after the implementation of intervention. In this study, there was an association found between knowledge scores and selected demographic variables like age in years, education by using chi-square test. Whereas, the knowledge level was not associated with some variables like marital status, gender, occupation.

CONCLUSION

Understanding road safety is essential for averting collisions, reducing injuries, and saving

lives. This study provides important insights into the impact of demographic factors and illuminates the participants' level of road safety knowledge. A moderate degree of road safety awareness was demonstrated by the greatest number of survey participants, who were primarily young and represented a wide demographic landscape. Given that educational background was found to have a substantial impact on road safety knowledge, it is advised that targeted road safety education programs be developed, with a special emphasis on those with lower educational levels.

Limitations

- ❖ The study only assesses the effectiveness of instructional approach on knowledge regarding prevention and management of road traffic accidents among adults.

Recommendations

- ❖ A descriptive survey can be conducted to assess the knowledge on prevention and management of road traffic accidents with large samples.
- ❖ The study can be conducted as a true experimental design with experimental and control group.
- ❖ A similar study can be conducted by using other strategies like booklets, pamphlets, flashcards etc.

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