



TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE REGARDING USE OF HELMET AMONG YOUNG ADULTS OF SELECTED COLLEGES: A STUDY PROTOCOL

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ABSTRACT

Background of study: Nowadays in young people the leading common cause of death is road traffic accidents. Creating an awareness regarding the use of helmet among two-wheeler riders will reduce the morbidity and mortality related to Road traffic accidents. It will save more lives and it is also a cost-effective intervention. Wearing helmet results in 70% reduction in the risk of head injury and 40% decrease in risk of mortality and reduces the length of hospital stay and medical costs of injured riders. **Objective:** To evaluate the effectiveness of structured teaching programme on knowledge and attitude regarding use of helmet among young adults of selected colleges. **Methodology:** Pre-experimental, one group Pre-test, post-test design will be used. 60 young adults will be assigned for study from selected colleges of Nagpur, Maharashtra, India by Simple random sampling. The duration of the study will be one month. The tool consists of self-structured questionnaire for knowledge and Likert scale for attitude assessment based on use of helmet. After pre-test and administration of structured teaching programme regarding use of helmet, post-test will be conducted on 7th day. Content validity of questionnaire will be done by the experts of concerned field. The collected data will be analysed by using descriptive and inferential statistics. **Expected result:** Young adults will be able to improve their knowledge regarding use of helmet. **Limitation:** The study will be conducted in the selected geographical area. **Conclusion:** This study will contribute to develop knowledge and enhance attitude regarding use of helmet among young adults and prevent the fatal and life-threatening events.

KEYWORDS : Structured teaching programme, helmet, young adults.

INTRODUCTION:

The use of two-wheeler for commute is increasing every day. The easy of a two-wheeler in a city traffic makes it an easy transport medium and a favourite choice for the majority of population. With the extensive use of a two-wheeler the accidents are also increasing. Safety helmet for two wheelers is the most important aspect to avoid fatal injuries. With increasing two-wheeler use specially among young adults, they tend to avoid use of helmet due to their poor knowledge about the safety or negative attitude towards the usefulness of a helmet in prevention of mortality rate. Looking towards the increase in fatal accidents there seems to be an urge for study about the knowledge and attitude of helmet use among the young adults.

According to study conducted in Vadodara one road accident every minute and one road accident death for every 4 minute occurs in India.¹

Wearing helmet results in 70% reduction in the risk of head injury and 40% decrease in risk of mortality and reduces the length of hospital stay and medical costs of injured riders.²The newly adopted 2030 Agenda for Sustainable Development has set an ambitious target of having the global number of deaths and injuries from road traffic crashes by 2020. In India according to national statistics 2013, 38.9 per 1000 population had road traffic crashes and were associated with 11 fatalities and 39.6 injuries.³ According to Global Status Report on Road Safety, RTAs were 9th leading cause of death in 2004. If no sustained action is taken then it will be seventh leading cause of death by 2030 overtaking diabetes and HIV/AIDS.⁴

Every year about 1.25 million people die as a result of road traffic crashes. 90% of the world's fatalities on the roads occur in low- and middle- income countries, even though these countries have approximately 54% of the world's vehicles. Nearly half of those dying on the world's roads are "vulnerable road users": pedestrians, cyclists, and motorcyclists. Road traffic crashes cost most countries 3% of their gross domestic product.⁵

The above stated research studies shows that the People of all ages involved in motorcycle-moped-scooter accidents who reported to hospital's emergency department and trauma centres.

OBJECTIVES:

- 1) To assess the knowledge and attitude regarding use of helmet among young adults of selected colleges.
- 2) To evaluate the effectiveness of structured teaching programme on knowledge and attitude regarding use of helmet among young adults of selected colleges.
- 3) To identify the correlation between knowledge and attitude regarding use of helmet.
- 4) To find the association of the study findings with selected demographic variables.

Hypotheses:

- H₀-** There will be no significant difference in the Knowledge and attitude of young adults regarding use of helmet after the implementation of structural teaching program.
- H₁-** There will be significant difference in the Knowledge and attitude of young adults regarding use of helmet after the implementation of structural teaching program.

MATERIALS AND METHODS:**Study design:**

Pre experimental, one group pre-test post-test research design.

Study setting:

The study will be conducted in selected colleges of Nagpur district, Maharashtra, India.

Participants: Young adults of selected colleges.

Sample size calculation:**Formula Used:**

$$n = (Z_{\alpha/2} + Z_{\beta})^2 2\sigma^2 / d^2,$$

Where:

$Z_{\alpha/2}$ is the critical value of the Normal distribution at $\alpha/2$ (for

95%, critical value is 1.96),

Z_{β} is critical value of Normal distribution at β (e.g., for 90% power, critical value is 0.84),

σ^2 is the population variance = 650 d is the difference you would like to detect = 15.85

(Rashid, D., Akhter, A, year2017) Putting these values in formula, the required sample size = 5

Adding 10% non-response rate, the required sample size = 61

Sampling procedure: Simple random sampling.

Inclusion criteria

- 1) Young adults who use two-wheelers.
- 2) Young adults willing to participate in the study.

Exclusion Criteria

Young adults with physical disability who use two wheelers with side wheel attached.

Variables:

Independent Variables: Structured teaching programme.

Dependent Variables: Knowledge and attitude.

Demographic Variables: Age, gender, educational qualification, socio-economic status and years of experience.

Data Collection Tools:

1. Demographic data sheet
2. Self-structured knowledge questionnaires
3. Five points Likert scale for attitude.

Discription Of Tool:

Knowledge assessment: The young adults' knowledge will be assessed by pre and post-test using self-structured multiple-choice questions (MCQs). Validity and reliability of tool will be assessed by appropriate statistical measures. Validity over the questionnaire will be established for build up through both the construct & content manner to seek for the results what has intended purposely for the inferences & conclusion to measure. Knowledge assessment will consider poor if the score is < 33 %, Average if it is 33.01 to 66 %, and Good if it is > 6.01%.

Attitude assessment: The young adults' attitude will be assessed by using the 5 points Likert scale. The self-structured 5 points Likert scale had total 14 questions and maximum score of each item is 5 and minimum score of each item is 1. Score 7 and less than 7 is consider as negative attitude and score 8 and more than 8 consider as positive attitude.

Description of Intervention:

The structured teaching programme aims to promote the use of helmets among young adults to enhance road safety and reduce the risk of head injuries and fatalities resulting from motorcycle and bicycle accidents. The intervention targets young adults, aged between 18 and 30 years, who are often a high-risk group for non-compliance with helmet usage.

The structured teaching programme should cover the following key topics:

- a. Introduction to Road Safety
- b. Helmet Types and Standards.
- c. Proper Helmet Fitting
- d. Helmet Maintenance
- e. Overcoming Barriers
- f. Role-playing and Simulation
- g. Personal Stories

The programme can employ various teaching methods like lecture, discussion, group activity etc to engage participants effectively. The structured teaching programme on the use of helmets among young adults can significantly contribute to promoting road safety and reducing head injuries. By imparting knowledge, addressing misconceptions, and fostering positive attitudes, the intervention aims to create a culture of helmet use, ultimately making roads safer for everyone.

Study Procedure And Data Collection:

The study shall be conducted only after the approval of the IEC. Permission to conduct the study shall be taken from relevant stakeholders. Young adults who fulfil inclusion criteria shall be assigned to the study. Written informed consent shall be taken from the participants. Each participant will receive a code number and self-administered questionnaires. A self-administered questionnaire will be used to obtain information on the socio-demographics of participants. Thereafter, baseline knowledge and attitude will be assessed. Ensuring proper spacing of participants in research studies is a common practice to minimize the potential for copying or sharing information during data collection. This approach helps maintain the integrity and validity of the study results. Thereafter, a Structured teaching program on use of helmet will be conducted for the participants on the same day. After seven days post-test for knowledge assessment and attitude evaluation will be conducted.

Statistical Analysis:

All the results will be calculated using SPSS version 26. Collected data will be coded, tabulated and analysed using descriptive and inferential statistics. The quantitative variables will be presented using descriptive statistical such as Mean, standard deviation and standard error of mean followed by graphs like histogram and box plot. The quantitative variables will be presented using frequency and percentage followed by charts like pie chart and bar chart. Inferential statistics (Paired t - test will be used to find the significance difference between two groups (before & after), Association results will be analysed using chi square analysis).

RESULTS:

Structured teaching programme will be effective in increasing knowledge and enhance positive attitude regarding use of helmet among young adults.

There will be positive or negative correlation between knowledge, attitude regarding use of helmet and selected demographic variables.

DISCUSSION:

Present study finding will be supported by different studies based on knowledge, attitude of use of helmet. Among such studies, a study was conducted by Nirbhay Mohod, (2018) Jalgaon, Maharashtra which was conducted to Assess the Knowledge Attitude and Practice regarding use of Helmet among Graduate Students at Selected Colleges.⁶

Present study will also support by the study conducted by Milan Tirwa Et al. to Assess the Awareness and Practices of Helmet Use among Two-Wheeler Riders in Delhi. Objectives To assess the awareness and practice of two-wheeler riders regarding the helmet use, and to determine the association of awareness and practices with selected variables. Setting and Design This article is a descriptive survey, which was completed at All India Institute of Medical Sciences (AIIMS) premises, New Delhi, India. Materials and Methods The pretested and validated tools developed by researcher consisted of demographic sheet (8 items) along with structured awareness and practice questionnaire. Results

and Conclusions Maximum participants were male (71.06%) with majority riding for 8 years. As much as 48% of the sample population had accidents while driving. Only 2.9% of them reported to have sustained severe injury during these accidents. The mean awareness and practice score related to helmet use were 49.58 6.019.75 5.56. There was weak correlation between awareness and practice. Association of awareness and practices with selected variables could not be observed (p-value—0.4870). Although public awareness is present, but law needs to be more stringent. Accidents are fatal and it can happen anywhere and anytime, irrespective of long or short distance, and wearing of helmet can save a person from major injuries.⁷

CONCLUSION:

After completion of data collection, conclusion will be drawn from the statistical analysis. Researcher expects that participants intervened with Structured Teaching Programme will benefit in the increase of knowledge and enhance positive attitude regarding the use of helmet among young adults riding two wheelers. The results of this study will contribute for the betterment of prevention of road traffic accidents hazards among young adults.

Consent And Ethical Approval:

The present study was approved by the Institutional Ethics Committee and concerned authorities of Government Medical College, Nagpur (GMC/IEC/2022-23/1666 dated 06.08.2022). All participants of this study were asked to read and sign the written informed consent form. Result of the study will disseminate to the participants and will publish in peer reviewed journal.

Conflict Of Interest: Authors declare no conflict of interest.

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