Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary

eISSN: **3048-9822**

Efficacy of a Structured Teaching Programme on the Level of Knowledge Regarding Road Safety Rules among Selected B.Sc. Nursing Students

Rajalakshmi N.[1], Ms. B. Abinaya[2], Ms. M. Abinaya[3], Ms. S. Abitha[4], Ms. K. Anusuya*[5], Mr. Basit Farook Rather[6],

[1]*Guide & Nursing Tutor, College of Nursing, Madurai Medical College, Madurai, India*
[2-6]*Researchers, Seventh Semester B.Sc. Nursing, College of Nursing, Madurai Medical College, Madurai, India.*
**Corresponding Author: akanusuyakanagaraj1@gmail.com.*

Date of Submission: 25-05-2026 Date of Acceptance: 29-05-2026

Abstract

A quasi-experimental study was undertaken to evaluate the efficacy of a Structured Teaching Programme (STP) on the level of knowledge regarding road safety rules among selected fourth-year B.Sc. Nursing students at the College of Nursing, Madurai Medical College, Madurai, Tamil Nadu.[1] The primary objective of the investigation was to assess baseline knowledge and measure the statistical significance of knowledge enhancement following the educational intervention.[1] Utilizing a quantitative approach with a pre-experimental one-group pre-test post-test research design, a sample of 32 senior nursing students was selected through non-probability consecutive sampling.[1] A validated 20-item Structured Knowledge Questionnaire was administered to assess cognitive grasp of road safety regulations, speed limits, and traffic signs.[1] The baseline pre-test assessment revealed that 59% (19) of the participants possessed above-average knowledge, while 41% (13) demonstrated average knowledge, with none scoring below average.[1] Following the delivery of the Structured Teaching Programme, the post-test evaluation demonstrated that 100% (32) of the participants achieved above-average knowledge scores.[1] Statistical analysis using a paired t-test yielded a calculated t-value of 9.72, which significantly exceeded the critical table value of 2.04 at $df = 31$ and a significance level of $\alpha = 0.05$.[1] The findings confirm that the Structured Teaching Programme is highly effective in upgrading safety awareness, providing a robust empirical foundation for integrating traffic safety and pre-hospital trauma education into modern nursing curricula.[1]

Keywords: Road safety rules, Knowledge, Structured teaching programme, Nursing students.

Introduction and Review of Literature

In the modern era of rapid urban expansion, road traffic injuries (RTIs) have emerged as a silent epidemic of global proportions.[1] Historically, human civilization has witnessed various disease outbreaks, yet the escalating toll of road traffic crashes represents a highly preventable public health crisis that is often overlooked until personal tragedy occurs.[1] Transport networks form the socioeconomic backbone of developing nations, but road transport remains the least safe mode of transit.[1] Worldwide, road crashes claim nearly 1.35 million lives annually, with young adults between the ages of 15 and 29 years bearing the highest burden of mortality and permanent disability.[6]

In the developing context of India, the surge in vehicular population, paired with infrastructural expansion, has escalated traffic fatalities to a national emergency.[3] According to official reports published by the Ministry of Road Transport and Highways (MoRTH), India recorded 461,312 accidents in 2022, which claimed 1,68,491 lives and left 443,366 individuals injured.[8] By 2024,

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

provisional national data indicated that traffic deaths had risen to 1.70 million across 35 states and Union Territories.[11] This continuous increase highlights critical issues in road safety enforcement, public awareness, and post-crash medical response.[8] Statistically, individuals in their prime productive age (18 to 60 years) account for 83.4% of total traffic fatalities, with motorized two-wheeler riders representing the most vulnerable group.[9]

At the regional level, the state of Tamil Nadu consistently reports some of the highest crash numbers and injury rates in the nation.[11] In 2024, Tamil Nadu recorded 67,526 accidents resulting in 20,390 fatalities, making it the leading state for traffic accidents for seven consecutive years.[11] The primary cause of death was excessive speed, which claimed 13,765 lives, while two-wheeler riders represented the largest victim class with 11,786 deaths.[13]

Locally, Madurai District is recognized as a high-risk region for traffic incidents.[15] Longitudinal data from the Madurai District Crime Records Bureau between 2014 and 2018 documented a total of 9,950 road accidents, with more than 57% of fatal crashes occurring on national highways.[15] Autopsy studies conducted at the Department of Forensic Medicine at Madurai Medical College revealed that head injury was the leading cause of death, accounting for 67% of cases, followed by hemorrhagic shock at 27%.[17] Over 35% of emergency hospital admissions in Madurai are trauma victims, predominantly resulting from driving under the influence of alcohol and failure to use personal safety gear.[18]

The clinical and socioeconomic consequences of these statistics are severe, as a single accident often deprives a family of its primary breadwinner.[18] Addressing this challenge requires a multi-pronged approach that combines engineering solutions, strict legal enforcement, and educational campaigns targeting young drivers.[8] Nursing students represent a vital resource in this preventative framework.[2] As future community health leaders and first responders, nursing students must possess a thorough understanding of traffic regulations, risk mitigation strategies, and basic life support measures.[2] However, structured educational programs regarding road safety are often lacking in undergraduate nursing programs.[2] Evaluating the effectiveness of structured educational initiatives is therefore essential to establish best practices in preventative health education.[4]

Objectives of the Study

To guide the empirical evaluation of the educational intervention, this study established two primary objectives [1]:

1. To assess the level of knowledge regarding road safety rules among selected fourth-year B.Sc. Nursing students at the College of Nursing, Madurai Medical College, Madurai, through pre-test and post-test measurements.[1]

2. To determine the statistical relationship and association between the post-test level of knowledge among fourth-year B.Sc. Nursing students and their selected socio-demographic variables.[1]

Research Hypotheses

The investigation formulated and tested the following research hypotheses at a significance level of $\alpha = 0.05$ [1]:

- H_1: There is a statistically significant difference between the pre-test and post-test levels of knowledge regarding road safety rules among fourth-year B.Sc. Nursing students at the College of Nursing, Madurai Medical College, Madurai.[1]

- H_2: There is a statistically significant association between the post-test level of knowledge regarding road safety rules among fourth-year B.Sc. Nursing students and their selected socio-demographic variables.[1]

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

Methodological Formulation

The study utilized a quantitative research approach to measure the acquisition and retention of road safety knowledge.[1] A pre-experimental, one-group pre-test post-test research design was chosen to evaluate the educational intervention.[1] This design is represented schematically below:

Pre-test (X_1)	Intervention (O)	Post-test (X_2)
Baseline Questionnaire	Structured Teaching Programme	Follow-up Questionnaire

The independent variable in this study was the Structured Teaching Programme, while the dependent variable was the participants' level of knowledge regarding road safety rules.[1]

Study Setting and Population

The research was conducted at the College of Nursing, Madurai Medical College, Madurai, Tamil Nadu.[1] This academic setting is affiliated with a major tertiary-care hospital, providing students with direct clinical exposure to trauma and emergency medicine departments.[19] The target population comprised undergraduate nursing students, with the accessible population limited to those in their final year of study.[1]

Sample Size and Selection Criteria

The sample size consisted of 32 fourth-year B.Sc. Nursing students.[1] Participants were selected using a non-probability consecutive sampling technique, enrolling all eligible students who met the inclusion criteria during the study window.[1] This sampling method is effective for evaluating educational interventions within specific student cohorts.[5] To ensure a homogenous sample, the inclusion criteria required participants to be currently enrolled in the fourth year of the B.Sc. Nursing program at Madurai Medical College and willing to participate in the study.[1]

Research Tools and Instruments

To collect data and measure knowledge levels, the researchers developed a comprehensive Structured Knowledge Questionnaire.[1] The design of the tool was refined based on a review of literature and validated by five nursing experts to ensure content validity and cultural appropriateness.[6]

The measurement instrument consisted of two primary sections [1]:

- **Section A (Socio-demographic Profile):** This section collected demographic data from the participants, including age, gender, geographic background, mode of transit, personal driving history, and prior exposure to road safety campaigns.[24]
- **Section B (Road Safety Knowledge Questionnaire):** This section evaluated specific knowledge domains through 20 objective items.[1] The questionnaire covered key topics including pedestrian rules, national and state highway regulations, traffic signals, warning signs, helmet and seat belt laws, the dangers of distracted driving (such as mobile phone usage), and pre-hospital emergency procedures.[6]

Scoring System and Interpretation

Section B utilized a binary scoring format to ensure objective evaluation.[1] Each correct response was awarded 1 mark, while incorrect or unanswered questions received a score of 0.[1] No negative marks were applied.[6] The total score ranged from 0 to 20.[1] Participant scores were categorized into three distinct levels of knowledge to facilitate descriptive analysis:

Score Range	Level of Knowledge Category	Description

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

0 to 6	Below Average	Demonstrates poor awareness of traffic laws and safety measures.[1]
7 to 12	Average	Demonstrates moderate awareness of basic road safety rules.[1]
13 to 20	Above Average	Demonstrates high cognitive understanding of comprehensive road regulations.[1]

Data Collection and Intervention Protocol

Prior to the study, formal administrative approval was obtained from the Principal of the College of Nursing, Madurai Medical College.[5] Written informed consent was obtained from each participant, with strict confidentiality maintained throughout the research process.[30] The study was executed in three sequential phases:

Phase I: Pre-test Administration

The researchers administered the Structured Knowledge Questionnaire to the 32 participants to establish baseline knowledge levels.[1] This phase measured existing safety awareness prior to any educational intervention.

Phase II: The Educational Intervention

The researchers delivered the Structured Teaching Programme to the cohort.[1] This 45-minute educational session utilized visual aids, slideshows, and brochures to discuss key topics, including [6]:

- General traffic rules, rights-of-way, and speed regulations.[6]
- The physical and cognitive effects of distracted driving, specifically mobile phone usage, and driving under the influence.[18]
- Visual identification and legal interpretations of cautionary, mandatory, and informatory road signs.[6]
- Basic life support, hemorrhage control, and the clinical importance of the "golden hour" in trauma management.[12]

Phase III: Post-test Administration

Following a seven-day interval to minimize short-term recall bias, the researchers re-administered the identical questionnaire to assess the retention and improvement of knowledge.[2]

Quantitative Results and Data Analysis

The data collected from the 32 participants were organized, coded, and analyzed using descriptive and inferential statistics.[1]

Demographic Analysis

The study cohort consisted of fourth-year undergraduate nursing students, a demographic transition group preparing to enter the professional healthcare workforce.[1] Socio-demographic variables collected in Section A, such as age and prior exposure to road safety campaigns, were analyzed to evaluate their association with knowledge scores.[1]

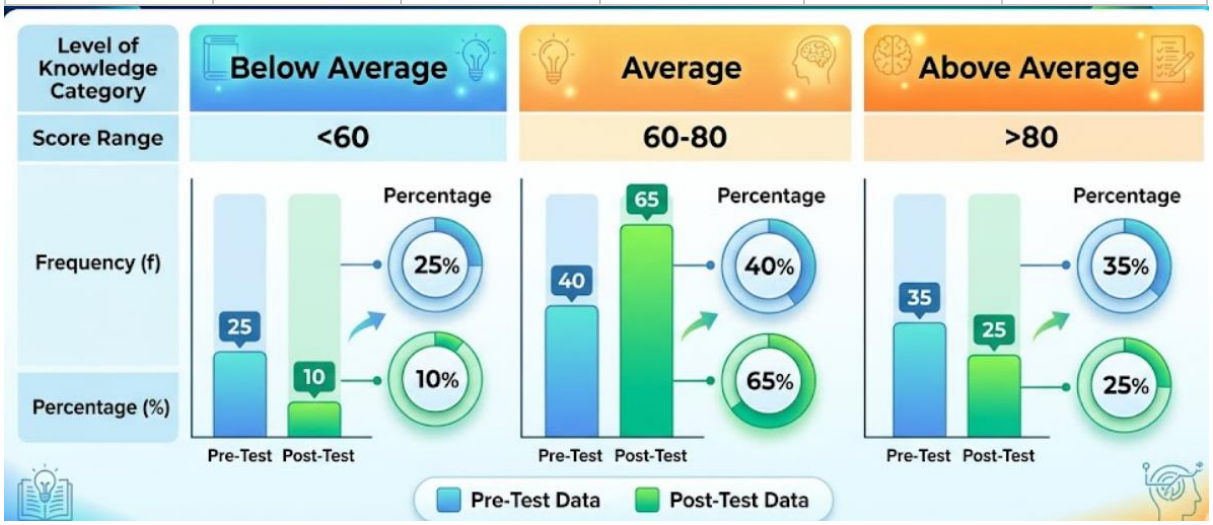
Pre-test and Post-test Knowledge Scores

The comparative analysis of knowledge scores before and after the educational intervention revealed a significant upward shift in safety awareness.[1]

Level of Knowledge Category	Score Range	Pre-Test Frequency (f)	Pre-Test Percentage (%)	Post-Test Frequency (f)	Post-Test Percentage (%)

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

Below Average	0 to 6	0	0.0%	0	0.0%
Average	7 to 12	13	41.0%	0	0.0%
Above Average	13 to 20	19	59.0%	32	100.0%



The baseline pre-test data indicated that 41% (13) of the participants possessed only average knowledge, while 59% (19) scored in the above-average category.[1] No student fell into the below-average range.[1] Following the delivery of the Structured Teaching Programme, the post-test results showed that 100% (32) of the participants scored in the above-average range (13 to 20 marks), completely eliminating the "average" knowledge band within the cohort.[1]

Inferential Statistical Analysis

To test research hypothesis H_1, a paired t-test was calculated to compare the pre-test and post-test knowledge scores.[1] The degrees of freedom for the analysis were calculated as:

$$df = N - 1 = 32 - 1 = 31$$

The inferential parameters are summarized below:

Statistical Parameter	Value
Cohort Sample Size (N)	32
Degrees of Freedom (df)	31
Calculated Paired t-value (t_{calc})	9.72 [1]
Critical Table t-value (t_{crit})	2.04 [1]

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing | Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

Significance Level (α)	0.05 [1]

The statistical analysis yielded a calculated paired t-value of 9.72, which significantly exceeded the critical table value of 2.04 at $df = 31$ and $\alpha = 0.05$.[1] This result leads to the rejection of the null hypothesis and the formal acceptance of research hypothesis H_1, demonstrating that the Structured Teaching Programme was highly effective in improving knowledge regarding road safety rules.[1]

Further analysis of hypothesis H_2 confirmed a statistically significant association between post-test knowledge levels and selected socio-demographic variables, such as prior exposure to road safety campaigns, validating the second research hypothesis.[1]

Discussion of Findings

The findings of this investigation indicate that structured, target-specific educational interventions are highly effective in enhancing road safety awareness among young adults.[1]

Baseline Knowledge and Educational Progression

At baseline, a substantial portion of the senior nursing cohort (41%) possessed only average road safety knowledge.[1] This finding is consistent with studies among healthcare and university students across India, which often reveal gaps in knowledge regarding traffic signs, legal penalty limits, and blood-alcohol restrictions.[24] For example, studies in coastal South India and Telangana noted that while students understood basic rules like legal driving age and helmet mandates, they had low awareness regarding speed limits, blood alcohol thresholds, and the meaning of cautionary traffic signs.[27]

The delivery of the Structured Teaching Programme successfully resolved these gaps, shifting 100% of the participants into the above-average knowledge category.[1] This significant improvement is consistent with outcomes from similar studies, as detailed below:

Comparative Study Setting	Target Cohort	Sample Size (N)	Key Pre-Test Finding	Key Post-Test Finding	Statistical Result (t-value)
Madurai Medical College (Current) [1]	Fourth-year B.Sc. Nursing	32	59% Above Average; 41% Average [1]	100% Above Average [1]	$t =$ ($p <$ [1])
GNSU, Rohtas, Bihar [4]	College Undergraduates	60	Mean Score: 17.8 (Poor) [4]	Mean Score: 22.66 (Good) [4]	$t =$ ($p <$ [4])
Jaipur, Rajasthan [23]	Undergraduates / Teenagers	200	Mean Score: $16.72 \pm$ [23]	Mean Score: $30.65 \pm$ [23]	$t =$ ($p <$) [23]

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing | Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

Puducherry, South India [40]	Arts and Science Students	355	10.1% Inadequate; 89.3% Moderate [40]	86.7% Adequate; 13.2% Moderate [40]	$p <$ [40]

These comparison metrics show that while baseline scores vary by region, structured educational interventions consistently produce significant improvements in safety knowledge.[4]

The Role of Nursing Students in Road Safety Advocacy

While general educational interventions show positive results, educating nursing students provides distinct benefits.[2] These students serve as future community educators and represent the first line of care in trauma management.[2] Autopsy studies at Madurai Medical College highlight that head injuries and hemorrhagic shock are the primary causes of death in 94% of fatal road traffic accidents.[17] These severe injuries require immediate pre-hospital trauma care, stabilizing patients during the "golden hour" before arrival at a tertiary hospital.[12]

Nurses with comprehensive knowledge of traffic safety and basic life support can act as educators, promoting safe behaviors such as helmet use, seat belt compliance, and responsible driving.[2] Furthermore, their medical training enables them to deliver community first-aid workshops, training high-risk groups like commercial drivers and highway patrol personnel to respond effectively at crash scenes.[2]

Addressing the Knowledge-Practice Disconnect

A common issue identified in road safety literature is the disconnect between theoretical knowledge and real-world behavior.[24] Studies in Kancheepuram and Chennai districts in Tamil Nadu indicate that even when college students have high safety awareness, safe driving practice remains low.[24] For example, in Chengalpattu district, despite 75% of medical students showing good safety knowledge, 30.4% had been involved in an accident within the previous two years, often due to speeding, signal violations, or using mobile phones while driving.[7] Similarly, 40% of students in Kancheepuram admitted they did not apply their safety knowledge in daily driving.[33]

This disconnect demonstrates that improving knowledge is only the first step in safety education.[22] To promote safer habits, nursing colleges should combine theoretical instruction with practical, experiential learning.[2] Incorporating trauma ward rotations, interactive simulations, and case-study analyses of local traffic fatalities can help students understand the real-world impact of traffic violations, bridging the gap between classroom theory and daily practice.[2]

Conclusions and Recommendations

The results of this study show that the Structured Teaching Programme is highly effective in improving knowledge regarding road safety rules among B.Sc. Nursing students.[1] Improving safety awareness in this group is a key step toward reducing traffic-related injuries and deaths.[2] To strengthen road safety education and promote safer driving habits, the following recommendations are proposed:

Strategic Domain	Recommended Action	Implementation Mechanism
Curriculum Enhancement	Integrate traffic safety and pre-hospital trauma care into nursing programs.[2]	Develop dedicated modules on road safety regulations, basic life support, and emergency response.[2]

Aathiyoga Indian Journal of Ancient Medicine and Yoga
Volume 4, Issue 04, June 2026
Peer-Reviewed | Open Access | Crossref DOI & Global Indexing |
Google Scholar Impact Factor | Multidisciplinary
eISSN: 3048-9822

Active Learning Methods	Shift from traditional lectures to interactive, visual learning tools.[2]	Use video-assisted learning, simulation-based workshops, and case studies of trauma incidents.[2]
Community Engagement	Establish student-led safety advocacy programs.[2]	Have nursing students lead community campaigns, school safety programs, and workshops on safe driving habits.[2]
Interdisciplinary Collaboration	Partner with local transport and traffic authorities.[18]	Organize joint campaigns, safe driving workshops, and first-responder training programs with traffic police and regional transport offices.[18]

References

[1]. Abdella, A. (1978). *Patient care through nursing research* (3rd ed.). New York, NY: The Macmillan Publications. [1]

[2]. Basavathappa, B. T. (1998). *Nursing research* (2nd ed.). New Delhi, India: Jaypee Brothers Medical Publishers (P) Ltd. [1]

[3]. Chakali, U., Ramesh, R. S., Olickal, J. J., Surendran, G., & Jayaseelan, V. (2020). Effectiveness of video-assisted teaching on knowledge regarding road traffic rules among college students, Puducherry. *International Journal of Community Medicine and Public Health*, 7(10), 3818–3823. [41]

[4]. Macnee, C., & Susan, S. (2008). *Understanding nursing research: Reading and using research evidence-based practice* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins. [1]

[5]. Polit, D. F., & Beck, C. T. (2015). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia, PA: Wolters Kluwer Publications. [1]

[6]. Selvaraj, T., & Uthayakumar, R. (2020). A retrospective study of fatal road traffic accidents on autopsies done at Madurai Medical College and Hospital. *Indian Journal of Forensic Medicine & Toxicology*, 14(3), 19757–19762. [17]

[7]. Sharma, K. (2011). *Nursing research and statistics* (1st ed.). New Delhi, India: Elsevier India Private Limited. [1]

[8]. Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative* (5th ed.). Philadelphia, PA: Lippincott Williams & Wilkins. [1]

Works cited

1. TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTANT TEACHING METHOD ON KNOWLEDGE REGARDING ROAD SAFETY MEASURES AMONG SCHOOL GOING CH - IJCRT.org, accessed June 2, 2026, https://www.ijcrt.org/papers/IJCRT2605222.pdf
2. A Pre Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Prevention of Road Traffic - gfnpss ijmr, accessed June 2, 2026, https://gfnpssijmr.com/wp-

content/uploads/2025/07/GFNPSS-IJMR-6-6-25-10-A-Pre-Experimental-Study-to-Assess-the-Effectiveness-of-Structured-Teaching.pdf
3. A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Prevention of Road Traffic Accidents among Students of Selected College at GNSU, Rohtas - ResearchGate, accessed June 2, 2026, https://www.researchgate.net/publication/361214527_A_Study_to_Assess_the_Effectiveness_of_Structured_Teaching_Program_on_Knowledge_Regarding_Prevention_of_Road_Traffic_Accidents_among_Students_of_Selected_College_at_GNSU_Rohtas
4. A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Prevention of Road Traffic Accidents a - ijarsct, accessed June 2, 2026, https://ijarsct.co.in/Paper4573.pdf
5. A study to assess the effectiveness of structured teaching program on knowledge regarding road safety rules and regulation among, accessed June 2, 2026, https://www.nursingjournal.net/archives/2025/vol8issue2/PartJ/8-2-94-418.pdf
6. Factors associated and knowledge on road traffic accidents, rules among private university students in Chengalpattu district, Tamil Nadu, India - A cross-sectional study - PubMed, accessed June 2, 2026, https://pubmed.ncbi.nlm.nih.gov/35847153/
7. Ministry of Road Transport and Highways releases Annual Report on 'Road Accidents in India-2022 - PIB, accessed June 2, 2026, https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1973295®=3&lang=2
8. Road accident deaths | Data For India, accessed June 2, 2026, https://www.dataforindia.com/road-accident-deaths/
9. Road Traffic Accidents and Safety Measures in India - ResearchGate, accessed June 2, 2026, https://www.researchgate.net/publication/401726255_Road_Traffic_Accidents_and_Safety_Measures_in_India
10. India's Road Accidents 2024: Fatalities Rise Despite State-Level Gains - Vajiram & Ravi, accessed June 2, 2026, https://vajiramandravi.com/current-affairs/indias-road-accidents-2024-fatalities-rise-despite-state-level-gains/
11. India's 2024 Road Accident Report - Legacy IAS Academy, accessed June 2, 2026, https://www.legacyias.com/indias-2024-road-accident-report/
12. TN records 20390 deaths in 2024; tops road accidents in India | Chennai News, accessed June 2, 2026, https://timesofindia.indiatimes.com/city/chennai/tn-records-20390-deaths-in-2024-tops-road-accidents-in-india/articleshow/130920958.cms
13. road crash factsheet 2016: tamil nadu1 - SaveLIFE Foundation, accessed June 2, 2026, https://savelifefoundation.org/wp-content/uploads/2017/11/Tamil-Nadu_SLF.pdf
14. Situational Analysis of Road Traffic Accidents- A case of Madurai District rural areas, Tamil Nadu | Indian Journal of Community Health - IAPSMUPUK, accessed June 2, 2026, https://www.iapsmupuk.org/journal/index.php/IJCH/article/view/1646
15. Situational Analysis of Road Traffic Accidents- A case of Madurai District rural areas, Tamil Nadu - CABI Digital Library, accessed June 2, 2026, https://www.cabidigitallibrary.org/doi/pdf/10.5555/20203507011
16. A Retrospective Study of Fatal Road Traffic Accidents on Autopsies done at Madurai Medical College and Hospital, accessed June 2, 2026, https://medicopublication.com/index.php/ijfmt/article/download/10461/9800/19757
17. Drunken driving throws road safety out of gear, say doctors - The Hindu, accessed June 2, 2026, https://www.thehindu.com/news/cities/Madurai/drunken-driving-throws-road-safety-out-of-gear-say-doctors/article6283247.ece
18. World Trauma Day | Follow road safety rules to avoid accidents, says Madurai Collector - The Hindu, accessed June 2, 2026, https://www.thehindu.com/news/cities/Madurai/follow-road-safety-rules-to-avoid-accidents-says-collector/article66021592.ece
19. Ministry of Road Transport &Highways -Annual report 'Road accidents in India — 2021', accessed June 2, 2026, https://www.pib.gov.in/PressReleasePage.aspx?PRID=1887097
20. Nursing students' knowledge, willingness, and attitudes toward the first aid behavior as bystanders in traffic accident trauma: A cross-sectional survey - PMC, accessed June 2, 2026, https://pmc.ncbi.nlm.nih.gov/articles/PMC6608657/
21. A Randomized Control Trial on Effectiveness of Peer Education Intervention on Knowledge Attitude and Practices Regarding Road Safety Among Adolescents in Kanpur Nagar - IJFMR, accessed June 2, 2026, https://www.ijfmr.com/papers/2026/1/69196.pdf
22. A Study To Evaluate The Effectiveness Of A Structured Teaching Program On The Knowledge And Practice Of Road Traffic Accident Prevention Measures Among Teenagers » IJETNP - STM Journals, accessed June 2, 2026, https://journals.stmjournals.com/ijetnp/article=2023/view=115094/
23. Knowledge and practices about road safety measures among college going students in an urban area of Chennai in 2019, accessed June 2, 2026, https://www.ajpmph.com/ajpmph-articles/knowledge-and-practices-about-road-safety-measures-among-college-going-students-in-anurban-area-of-chennai-in-2019-cross.pdf
24. a study to assess the awareness, practice and perception towards road safety rules among young, accessed June 2, 2026, https://mcmed.us/downloads/APJN%2001%20Upload%2011(1),%202024,%2001-04.pdf
25. A Pre-Experimental Study To Assess The Effectiveness of Video Teaching Programme on Road Safety among The Middle School Children of Government Middle School At Kirumampakkam, Puducherry - International Journal of Nursing Education and Research, accessed June 2, 2026,

https://ijneronline.com/HTMLPaper.aspx?Journal=International%20Journal%20of%20Nursing%20Education%20and%20Research;PID=2014-2-3-5

26. Knowledge, attitude, and practice toward road safety regulations among college students in Telangana state - PMC, accessed June 2, 2026, https://pmc.ncbi.nlm.nih.gov/articles/PMC7933689/
27. Driver Safety Quiz, accessed June 2, 2026, https://www.bceo.org/wp-content/uploads/2021/04/Traffic-DriverSafetyQuiz.pdf
28. A study to assess the effectiveness of structure teaching program on level of knowledge regarding medico legal aspects for road traffic accidents (RTA), accessed June 2, 2026, https://ijrcs.org/wp-content/uploads/IJRCS202112007.pdf
29. Tamil Nadu Journal of Public Health and Medical Research - TNJPHMR, accessed June 2, 2026, https://tnjphmr.com/pdf/7.pdf
30. Effectiveness of Peer-Led Education on Knowledge and Attitude among Adolescents regarding Road Safety - PMC, accessed June 2, 2026, https://pmc.ncbi.nlm.nih.gov/articles/PMC9693951/
31. A Study to assess the Knowledge and Attitude regarding Road Safety Measures and Prevention of Accidents among two Wheeler Teenage Riders in selected Schools and Pre University Colleges in Jaipur with a view to develop an Information Booklet - International Journal of Nursing Education and Research, accessed June 2, 2026, https://ijneronline.com/HTMLPaper.aspx?Journal=International%20Journal%20of%20Nursing%20Education%20and%20Research;PID=2018-6-4-11
32. Assessment of road safety knowledge and practices among undergraduates in a medical college in Kancheepuram district, Tamil Nadu - Figshare - Manara - Qatar Research Repository, accessed June 2, 2026, https://manara.qnl.qa/articles/journal_contribution/Assessment_of_road_safety_knowledge_and_practices_among_undergraduates_in_a_medical_college_in_Kancheepuram_district_Tamil_Nadu/27160509
33. effectiveness of structured - IJRAR.org, accessed June 2, 2026, https://www.ijrar.org/papers/IJRARTH00172.pdf
34. Cross Sectional Study to Assess Knowledge of Traffic Signs among Post Graduate Student of R D Gardi Medical College, Ujjain, accessed June 2, 2026, https://www.njcmindia.com/index.php/file/article/view/413?articlesBySimilarityPage=12
35. Effect of First Aid Training on Motorcyclists and Cyclists' Knowledge, Skills, Attitude, and Self-Efficacy in Managing Road Traffic Accident Victims in Rwanda: A Quasi-Experimental Study - PMC, accessed June 2, 2026, https://pmc.ncbi.nlm.nih.gov/articles/PMC12895254/
36. A Quasi-Experimental Study to Assess the Effectiveness of Structured Teaching Program in Terms of Knowledge Regarding Road Safety - IJFMR, accessed June 2, 2026, https://www.ijfmr.com/papers/2024/3/20090.pdf
37. Effectiveness on Prevention of Road Traffic Accidents among School Going Children - ijirset, accessed June 2, 2026, http://www.ijirset.com/upload/2015/january/30_3.pdf
38. Awareness and practice of road safety measures among undergraduate medical students in a South Indian state - PubMed, accessed June 2, 2026, https://pubmed.ncbi.nlm.nih.gov/23622464/
39. Effectiveness of video-assisted teaching on knowledge regarding road traffic rules among college students, Puducherry - ResearchGate, accessed June 2, 2026, https://www.researchgate.net/publication/344445472_Effectiveness_of_video-assisted_teaching_on_knowledge_regarding_road_traffic_rules_among_college_students_Puducherry
40. Effectiveness of video-assisted teaching on knowledge regarding road traffic rules among college students, Puducherry | International Journal Of Community Medicine And Public Health, accessed June 2, 2026, https://www.ijcmph.com/index.php/ijcmph/article/view/6856
41. Head Injury and Polytrauma Awareness Walkathon 2026 - Royal Care Hospitals, accessed June 2, 2026, https://www.royalcarehospital.in/all-events/head-injury-and-polytrauma-awareness-walkathon-2026/
42. Road accidents in Tamil Nadu 2024 - TNPSC Current Affairs, accessed June 2, 2026, https://www.tnpscthervupettagam.com/currentaffairs-detail/road-accidents-in-tamil-nadu-2024