ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF ROAD SAFETY MEASURES AMONG UNDERGRADUATE MEDICAL STUDENTS IN A TERTIARY HEALTH CARE CENTER IN CENTRAL INDIA

Dr. Suresh Kumar Nagwanshi[1], Dr. Rohit Trivedi[2], Dr. Amarnath Gupta[3], Dr. Shatkratu Dwivedi[4*], Dr. Shraddha Mishra[5], Dr. Rakesh Mahore[6], Dr. Bhupendra Kumar Rohit[7], Mrs. Sandhya Singh[8]

[1]PG Resident, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[2]Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[3]Associate Professor & HOD, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[4*]Assistant Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[5]Associate Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[6]Assistant Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[7]Assistant Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India
[8]Statistician, Department of Community Medicine, Bundelkhand Medical College, Sagar (M.P.) India

***CORRESPONDING AUTHOR:Dr. Shatkratu Dwivedi**

Email ID- dr.shatkratu@gmail.com

ABSTRACT

INTRODUCTION

In recent years, road accidents and injuries have grown to be a major worldwide epidemic and the leading cause of death for younger people in the 15-29 age range. According to the "Ministry of Road Transport and Highways GOI" report 2022, there were 461312 incidences of road accidents in India during 2022, which claimed 168491 lives and caused injuries to 443366 persons. Amongst the States, Madhya Pradesh recorded the second highest number of road accidents (48,877), i.e., 11.8%, in 2021. This study aims to assess the knowledge, attitude, and practice of road safety measures among undergraduate medical students in a tertiary health care center in Central India.

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

METHODOLOGY

A cross-sectional study was conducted among 180 undergraduate medical students (i.e., 45 from the first professional, 45 from the second professional, 45 from the pre-final, & 45 from the final year) at Government Bundelkhand Medical College, Sagar (M.P.) during the period from October 2023 to November 2023. The sampling was done using the stratified random sampling method. Using a pre-designed questionnaire to assess the knowledge, attitude, and practice of road safety measures. The collected data was analyzed using IBM SPSS version 26.0 (IBM Corp., Armonk, NY). The statistical analysis was done using relevant statistical tests.

RESULTS

The present study was conducted among 180 study participants, of whom 119 (66.1%) were in the 21-25 age group. Most of them were males, 106 (58.9%). The overall knowledge was adequate (81.5%) among study participants, and a good attitude towards road safety measures was exhibited by 98.7% of the study participants.

The distribution of practice among study participants showed that only 27.2% always used helmets & 24.4% always used seatbelts. While driving a vehicle, 42.2% of study participants always used an indicator while turning onto the road.

CONCLUSION

The present study showed that overall knowledge regarding road safety was good. Most of the study participants had a favorable attitude towards road safety measures. However, knowledge is not being put into practice, which calls for more enforcement of the law, increased IEC activity, and incentives to put knowledge into effect.

KEYWORDS

Road Traffic Accidents, Under graduate medical students, Government Bundelkhand Medical College, Sagar, Central India

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

MAIN ARTICLE

INTRODUCTION

An accident is defined as an unforeseen, unplanned event that may result in injuries. These days, accidents are a major cause of noncommunicable diseases. The number of automobiles on the road has significantly expanded as a result of industrialization and urbanization. Among all age categories, road traffic accidents (RTA) rank as the eighth most common cause of mortality. Over 1.35 million people die and 50 million people are injured worldwide as a result of RTAs. The majority of road traffic fatalities and injuries occur in low- and middle-income nations [1]. Rapid economic growth in low- and middle-income nations, along with urbanization and motorization, are the main causes of the global increase in RTA-related deaths. According to the World Health Organization, approximately 10% of individuals who die on roads worldwide are from India.

According to the Ministry of Road Transport and Highways GOI report 2022, there were 461312 incidences of road accidents in India during 2022, which claimed 168491 lives and caused injuries to 443366 persons. All three indicators were recorded in 2022. The number of road accidents, the number of people killed, and the number of injuries has increased compared to the previous year by 11.9%, 9.4%, and 15.3%, respectively. 18 to 45 years old is sadly the age group most hit by traffic accidents, accounting for almost 67% of all unintentional deaths [2].

Despite having the second-longest road network in the world, 4.8% of which are highways, India continues to see an increase in road traffic accidents (RTAs) and fatalities as a result of a lack of progress in safety standards and infrastructure expansion. The foundations of road safety include human behavior, road design, and acceptance of safety. The following factors are more closely linked to RTAs: speeding, intoxication, wearing seat belts, and distracted driving from cell phones [3]. Amongst the states, Madhya Pradesh recorded the second highest number of road accidents (48,877), i.e., 11.8%, in 2021, after Tamil Nadu [4].

The rationale of the study is to investigate the knowledge, attitude, and practice towards road traffic measures among college students, as most of the fatalities due to road traffic accidents were among younger people. Since youngsters will make up the majority of the future population, it is imperative that we raise awareness of the need for road safety and educate them about it. This

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

study will provide a golden opportunity to assess and educate the medical students in order to decrease the knowledge and practice gap and persuade them toward following road safety measures. With this background, the present study was undertaken among college students in Sagar city, Madhya Pradesh. This study aims to assess the knowledge, attitude, and practice of road safety measures among undergraduate medical students in a tertiary health care center in Central India.

MATERIAL AND METHODS

Study design, study duration, study population and study area

This was a cross-sectional study done between October 2023 and November 2023, conducted among undergraduate medical students at Government Bundelkhand Medical College, Sagar (M.P.).

Sample size and sampling method

According to Ministry of Road Transport and Highway Transport Research Wing report 2021, the prevalence of road accidents in Madhya Pradesh in 2021 is 11.8% [4].

The sample size was calculated using formula $n=Z^2pq/d^2$

Here,

n = Sample size

Z = Confidence interval (for 95%, it is 1.96)

p = Prevalence of road accidents (11.8%)

q = Compliment of p (88.2%)

d = Margin of error (5%)

After putting all the values in the above formula, the sample size comes out to be 160. After adding 10% non-respondents, the sample size comes to 176, which is rounded to 180.
The stratified random sampling method was used until the required sample size was achieved.

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

Inclusion and exclusion criteria

Study participants were included based on the following criteria:

All undergraduate medical students, from first professional to final year.

Study participants were excluded based on the following criteria:

1) Those undergraduate medical students who don't want to participate in the study.
2) Those undergraduate medical students who were absent on the day of data collection.

Selection procedure

The study was conducted among 180 undergraduate medical students (45 from the first professional, 45 from the second professional, 45 from the pre-final, & 45 from the final academic year) at Government Bundelkhand Medical College, Sagar (M.P.). The selection process for study participants was done using stratified random sampling method.

Study Tool & data collection

A pretested semi-structured, self-administered questionnaire with four domains- demographic information, knowledge, attitude, and practice of road traffic measures—was created using some of the previous studies [5], [6], [12] on knowledge, attitude, and practice on road safety measures. It was validated by conducting pilot study, and necessary changes were made before finalizing the study tool. There was a total of 29 questions, which include five about demographics, nine about knowledge, six about attitude, and nine about practicing traffic safety measures.

After getting verbal consent from the undergraduate medical students, the pretested questionnaire was administered. Interviews of undergraduate medical students were taken at Government Bundelkhand Medical College Sagar (M.P.), and detailed information regarding their socio-demographic characteristics, knowledge, attitude, & practices towards road traffic measures was taken. Data were collected by a Google form.

Ethical consideration

The ethical clearance for the study was obtained from the institutional ethical committee at Bundelkhand Medical College, Sagar (M.P.). Registration number: EC/NEW/INST/2022/3174. Approval certificate number is IECBMC/DHR/2023/24 under the new drug and clinical trials rule, 2019. The study participants were briefed about the purpose and nature of the study.

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

Statistical analysis plan

Data was compiled using MS-Excel, and analysis was done with the help of IBM SPSS version 26.0 (IBM Corp., Armonk, NY). Data were expressed as frequency, proportions, or mean and standard deviation. The chi-square test/Fisher exact test were used. A p-value of <0.05 was designated as the significance level.

RESULTS

The present study was conducted among 180 study participants, of whom 119 (66.1%) were in the 21–25 age group. The mean age of the study participants was 22.26 ± 2.234. Most of them, 106 (58.9%), were males. About the father's education of study participants, 65.6% were graduates or postgraduates, and only 0.6% were illiterate. 21.1% of the mothers of study participants were graduates or postgraduates, and 10% of the mothers were illiterate (Table 1).

Table-1: Demographic characteristics of study participants (n=180)

Characteristics		Frequency (n) (%)
Age (in years)	≤20 Years	49 (27.2%)
	21-25 Years	119 (66.1%)
	≥26 Years	12 (6.7%)
Mean Age ± SD	22.26 ± 2.234	
Sex	Male	106 (58.9%)
	Female	74 (41.1%)
Year of Student	1st Year	45 (25%)
	2nd Year	45 (25%)
	Pre-Final Year	45 (25%)
	Final Year	45 (25%)
Fathers Education	Illiterate	1 (0.6%)
	Primary School	1 (0.6%)
	Middle School	10 (5.6%)
	High School	20 (11.1%)
	Higher Secondary School	30 (16.7%)
	Graduate/Post Graduate	118 (65.6%)
Mothers Education	Illiterate	18 (10%)
	Primary School	14 (7.8%)
	Middle School	28 (15.6%)
	High School	38 (21.1%)

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

	Higher Secondary School	44 (24.4%)
	Graduate/Post Graduate	38 (21.1%)

Knowledge: -

The minimum age to obtain a driving license is 18 years, which was known by 98.9% of the study participants in the present study. Out of 180 study participants, only 38.9% were knew the permissible blood alcohol limit for driving in India (p value = 0.001) (Figure 1); 99.4% knew the seatbelt is compulsory for moving a car, 100% of study participants knew wearing a helmet is compulsory while riding a two-wheeler, 94.4% of study participants had correct knowledge of traffic lights, 71.1% of study participants knew from where overtake a vehicle (p value = 0.01); 92.2% of study participants knew the side of the road for walk to reduce accidents (p value = 0.001); and 75.6% knew the maximum penalty for driving without a valid driver's license (p value=0.008) (Table 2).

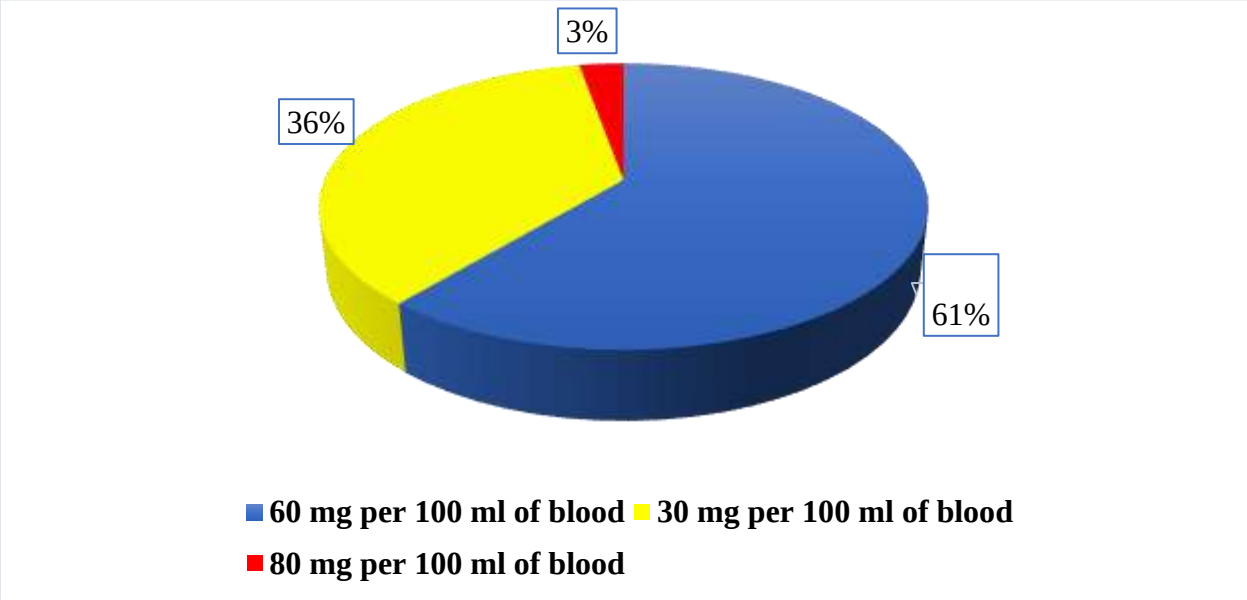
Table-2: Knowledge regarding road traffic measures among study participants (n=180)

Knowledge (n=180)	Correct (n) (%)	Incorrect (n) (%)	Don't Know (n) (%)	p - value
Age to get major driving license?	178 (98.9%)	1 (0.6%)	1 (0.6%)	0.345
Is it compulsory to put on the seatbelt while you are in a moving car?	179 (99.4%)	1 (0.6%)	0	0.230
Normal speed limit for Car driving in City	113 (62.8%)	67 (37.2%)	0	0.147
What is the permissible blood alcohol limit for driving in India?	70 (38.9%)	110 (61.1%)	0	0.001*
Is it mandatory to wear a helmet while riding a two-wheeler?	180 (100%)	0	0	

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

Indication of amber (yellow) light in a traffic signal?	170 (94.4%)	5 (2.8%)	5 (2.8%)	0.143
From where do you overtake a vehicle?	128 (71.1%)	17 (9.4%)	35 (19.4%)	0.01*
On which side of the road, you must walk to reduce accidents?	166 (92.2%)	11 (6.1%)	3 (1.7%)	0.001*
Maximum penalty for driving without a valid driver's license?	136 (75.6%)	44 (24.4%)	0	0.008*

*Statistically significance



Picture-01: Knowledge about permissible blood alcohol limit for driving in India

Attitude: -

A good attitude towards road safety measures was exhibited by 98.7% of the study participants, and 99.4% of the study participants said that obeying traffic laws reduces accidents. Among 180 study participants, 98.9% felt road sign & symbols reduce accidents, 99.4% felt using mobile phone while riding/driving a vehicle increases chances of accidents, and 97.2% study participants felt owing license for vehicle is necessary (Table 3).

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

Table-3: Attitude regarding road traffic measures among study participants (n=180)

Attitude (n=180)	Yes (n) (%)	No (n) (%)	May be (n) (%)	p - value
Pediatricians must be given prime importance regarding safety?	180 (100%)	0	0	
Does following traffic rules reduce accidents?	179 (99.4%)	1 (0.6%)	0	0.230
Do road signs and symbols reduce accidents?	178 (98.9%)	2 (1.1%)	0	0.108
Does not wearing a helmet increase your chances of getting into an accident?	175 (97.2%)	5 (2.8%)	0	0.031*
Using mobile phone increases the chance of an accident.	179 (99.4%)	1 (0.6%)	0	0.230
Owing license for vehicle is necessary?	175 (97.2%)	4 (2.2%)	01(0.6%)	0.315

*Statistically significance

Practice: -

The distribution of practice among study participants showed that, out of 180 study participants, only 147 students ride motorcycles. Only 27.2% study participants always used helmets while driving a vehicle (p value = 0.015) and only 24.4% study participants always used seatbelts when traveling in four-wheeler (p value = 0.040). About 49.7% of study participants rarely listened to loud music while driving a vehicle (p value = 0.001). Among the 147 study participants, 37.4% sometimes used electronic devices (p value = 0.009) and 21.1% rarely drove or rode a vehicle under the influence of alcohol (p value = 0.001). While driving a vehicle, 25.2% study participants always used indicators while turning into the road (p value = 0.043) (Table 4).

Table-4: Practice regarding road traffic measures among study participants

Practice	Always n (%)	Very often n (%)	Sometimes n (%)	Rarely n (%)	Never n (%)	p-value
Do you wear a	40 (27.2%)	52 (35.4%)	53 (36.1%)	1 (0.7%)	1 (0.7%)	0.015*

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

helmet while riding a bike? n=147						
Drive when sleepy? n=147	0	2 (1.4%)	5 (3.4%)	73 (49.7%)	67 (45.6%)	0.001*
Use electronic device while driving? n=147	1 (0.7%)	5 (3.4%)	55 (37.4%)	49 (33.3%)	37 (25.2%)	0.009*
Listen to loud music while driving? n=147	0	1 (0.7%)	23 (15.6%)	73 (49.7%)	50 (3%)	0.001*
Drive under influence of alcohol? n=147	0	0	11 (7.5%)	31 (21.1%)	105 (71.4%)	0.001*
Use Seatbelt when traveling in four-wheeler? n=180	44 (24.4%)	69 (38.3%)	60 (33.3%)	5 (2.8%)	2 (1.1%)	0.040*
Use zebra crossing to cross road? n=180	36 (20%)	37 (20.6%)	89 (49.4%)	18 (10%)	0	0.160
Obey road signs & symbols? n=147	37 (25.2%)	63 (42.9%)	42 (28.6%)	5 (3.4%)	0	0.001*
Use of indicator while	62 (42.2%)	72 (49%)	11 (7.5%)	2 (1.4%)	0	0.043*

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

turning? n=147						

*Statistically significance

DISCUSSION

Our study focused on almost all aspects of the issues related to knowledge, attitude, and application of road safety measures, which sets it apart from similar studies that have been conducted before. The present study included 180 study participants, of whom most (58.9%) were males, and the most common age group (66.1%) was 21–25 years.

The minimum age to obtain a driving license is 18 years, which was known by 98.9% of the study participants in the present study. Similar results were reported by A. E. Mary et al. [7], where 97.5% of the study participants knew the minimum age to obtain a driving license. Out of 180 study participants, 71.1% knew from where to overtake a vehicle (p value = 0.09), 75.6% knew the maximum penalty for driving without a valid driver's license (p value = 0.008), and 92.2% knew the side of the road for a walk to reduce accidents. The findings were much higher than those of the study conducted by Ranjan et al. [8], found that only 32.8% knew that one should overtake from the right side of the road, 57.8% of the respondents knew the maximum penalty for driving without a valid license, and 54.2% of them knew which side of the road to use to reduce accidents. Out of 180 study participants, only 38.9% knew the permissible blood alcohol limit for driving in India (p value = 0.001), 99.4% knew the seatbelt is compulsory for moving a car, 100% knew wearing a helmet is compulsory while riding a two-wheeler, and 94.4% of study participants had correct knowledge of traffic lights. A similar study conducted by K.Y. Jothula et al. [9], found that only 6.8% of the participants knew the allowed blood alcohol limit for drivers/riders in India, about 97.7% of the study participants knew that it is mandatory to wear a helmet while driving a scooter/bike in India, and only 27.5% of the participants had correct knowledge of traffic lights.

The overall knowledge was adequate (81.5%) among study participants, similar to the study by Emmily MK et al. [10], where the knowledge was 82%. Contrarily, the level of knowledge was high (91.1%) in the study by Kalbandkeri et al. [11]. Because road safety measures are part of the curriculum for medical students in India, it's possible that the high level of knowledge in this study stems from this.

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

98.7% of the study participants had a positive attitude toward road safety measures, which was greater than the 95.6% of participants in the study by G. Monica et al. [1]. Due to greater awareness, 99.4% of respondents said that obeying traffic laws reduces accidents, which is significantly higher than the findings of a study by Kalbandkeri et al. [11]. Among 180 study participants, 99.4% felt using a mobile phone while riding/driving a vehicle increased the chances of an accident; 98.9% of respondents felt road signs & symbols reduced accidents; and 97.2% of study participants felt owing license was necessary. A similar study was conducted by Jagadish Anil Cacodcar et al. [12], in which 96.7% of respondents felt that it was not correct to use a mobile phone while riding/driving a vehicle, 79.9% felt that road signs and symbols help in reducing accidents, and 77.3% felt that it is not alright to drive before obtaining a driving license.

The distribution of practice among study participants showed that only 27.2% of study participants always used helmets while driving a vehicle (p value = 0.015) and only 24.4% of study participants always used seatbelts when traveling in a four-wheeler (p value = 0.040). A study conducted by K. Nagendra et al. [13,] reported that 25.98% of study participants always wear helmets while driving a vehicle, and 12.70% always wear seatbelts promptly whenever they drive a car. V. Kulkarni et al. [14], reported 14.2% of respondents never wearing seatbelts. While driving a vehicle, 25.2% of study participants always used indicators while turning onto the road. Similarly, Baniya S. et al. [15], reported that 59.2% of respondents always obeyed road signs & symbols. About 73 (49.7%) of study participants rarely listened to loud music while driving a vehicle (p value = 0.001). Among the 147 study participants, 37.4% sometimes used electronic devices, and 21.1% rarely drove or rode a vehicle under the influence of alcohol. In contrast to our study, AC Shyam et al. [16], reported that 14.7% of students have sometimes used mobile phones while driving/ riding, including texting, & 1.5% have admitted to being involved in drunken driving.

Strengths and limitations

The study's strength is how well it highlights medical students understanding of and attitudes toward traffic safety laws, as well as how much they really apply them. Another advantage of the current investigation is the paucity of available literature. A few restrictions, including this study, were performed among educated groups, so there needs to be more study of uneducated people and public transport personnel.

CONCLUSIONS

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

According to our study, medical students had favorable knowledge & attitudes towards road safety measures, but their actual application was lacking. In some cases, the knowledge was not applied in practice. A good understanding of traffic safety precautions, such as using a helmet, wearing a seatbelt, observing all traffic signal laws, and refraining from driving after intoxication, can prevent accidents.

Policy approaches should be considered to enhance appropriate legislation regulating the unsafe use of mobile devices while driving. Everyone must follow the tight traffic regulations. The 4Es—education, enforcement, engineering, and environment or emergency care—are the cornerstones of road safety. However, now the road infrastructure in India has become much better than before, and emergency services are also being provided on the roads very quickly. Furthermore, good intersectoral coordination among various departments, such as the Department of Road Traffic, the Public Works Department, and the Department of Education, is required to reduce road traffic accidents in the future.

CONFLICT OF INTEREST

No

REFERENCES

1. KNOWLEDGE, ATTITUDE AND PRACTICE OF ROAD SAFETY MEASURES AMONG UNDERGRADUATE MEDICAL STUDENTS IN A TERTIARY HEALTH CARE INSTITUTE, MEDCHAL, TELANGANA STATE., Dr. G. Monica, Dr. Kusneniwar G.N., Dr. L.S. Vaz INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH: Volume-9/Issue-3/March-2020
2. Road Accidents in India | Ministry of Road Transport & Highways, Government of India [Internet]. [cited 2024 Mar 10]. Available from: https://morth.nic.in/sites/default/files/RA_2022_30_Oct.pdf
3. Gururaj G, Gautham M S. Advancing Road Safety in India-Implementation is the Key, Bengaluru, 2017. National Institute of Mental Health & Neuro Sciences; 2017. Publication Number :136.
4. India | Road Accidents: Madhya Pradesh | CEIC [Internet]. [cited 2024 Mar 10]. Available from: https://www.ceicdata.com/en/india/road-accidents-madhya-pradesh

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

5. Balaji T, N.V M, Jain T. A cross-sectional study to assess the knowledge, attitude and risk- behaviour towards Road Safety among Undergraduate Medical Students, Kanchipuram, Chennai. Int J Res Pharm Sci. 2021 Jan 6;12:213–21.
6. Suresh K. Sharma and Parul Saini. (2017); Knowledge, Attitude and Practices towards Road Traffic Safety Regulations among Health Science Students in Uttarakhand: A cross-sectional study *Int. J. of Adv. Res.* **5** (Mar). 608-614] (ISSN 2320-5407).
7. A cross sectional study to assess the knowledge, attitude and practice towards road safety rules and regulations among Higher Secondary school students in Chennai [Internet]. [cited 2024 Apr 18]. Available from: https://www.ijbamr.com/assets/images/issues/pdf/September%202016%20779-789.pdf.pdf
8. Ranjan DP, Fahim MA, Kirte RC.A cross sectional study to assess the knowledge, attitude and practice towards road traffic safety among adolescent students of a selected Pre-University college in Raichur city. Int J Community Med Public Health2018;5:2446-52.
9. Jothula KY, Sreeharshika D. Knowledge, attitude, and practice toward road safety regulations among college students in Telangana state. J Educ Health Promot. 2021 Jan 28;10:25. doi: 10.4103/jehp.jehp_442_20. PMID: 33688534; PMCID: PMC7933689.
10. Mk E. Assessment of Knowledge and Practice Measures Regarding Prevention of Road Traffic Accidents among Undergraduate Medical Students. 2016;
11. Kalbandkeri LR, G B, Ghooli S. A study to assess the knowledge and practice of road safety measures among undergraduate medical students of M. R. Medical College, Kalaburagi. Int J Community Med Public Health. 2018 Mar 23;5(4):1596–601.
12. Cacodcar JA, Naik AV. A study to assess knowledge, attitude, and practices regarding road safety among college students in Goa. Int J Med Sci Public Health 2020;9(10):616-620.
13. Kanchana Nagendra, Raghavendraswamy Koppad. Prevalence of Intentional and Unintentional Injuries among Adolescents of Rural and Urban Shivamogga – A Cross-Sectional Study. Nat J Res Community Med 2018;7(2):104-106.

ISSN: 0975-3583, 0976-2833 VOL 15, ISSUE 07, 2024

14. Kulkarni V, Kanchan T, Palanivel C, Papanna MK, Kumar N, Unnikrishnan B. Awareness and practice of road safety measures among undergraduate medical students in a South Indian state. J Forensic Leg Med. 2013 May;20(4):226–9.
15. Baniya S, Timilsina A. Knowledge and Practice of Road Safety Rules and Regulations among Secondary School Students. Prithvi Acad J. 2018 May 31;1(1):23–33.
16. A.c.1 S, Nadeer2 M. Awareness & Practice of Road Safety Measures among Under Graduate Medical Students of a Medical College in Bengaluru, Karnataka. Indian J Public Health Res Dev. 2020 Jan 31;11(1):198–201.