

# ORIGINAL ARTICLE

## A STUDY ON KNOWLEDGE ATTITUDE AND PRACTICE OF ROAD SAFETY MEASURES AMONG COLLEGE STUDENTS IN VISAKHAPATNAM CITY

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**ABSTRACT: INTRODUCTION:** Road Traffic Injuries are among the 3 leading causes of death for people between 5 – 45 years of age. Unless immediate and effective measures are taken, Road Traffic Injuries are predicted to become the 5<sup>th</sup> leading cause of death in the world, resulting in an estimated 2.4 million deaths each year which can be avoidable by taking simple road safety measures. **OBJECTIVES:** To assess Knowledge, Attitude and Practice of road safety measures among college students in Visakhapatnam city. **METHODOLOGY:** A Cross sectional study was conducted among 150 college students in Visakhapatnam city during the month of January, 2015. Three professional colleges were selected randomly and 50 students from each college were chosen by convenient sampling technique. A pre tested semi structured questionnaire was administered after taking consent from the students. Proportions were calculated and Chi-square test was applied to test the statistical association. **RESULTS:** Among 150 students 62% were females and 38% were males. There was difference in knowledge levels between males and females, about 67% of females had knowledge that speed limit should be followed while driving when compared to 30% of males. This difference was statistically significant (Chi square value=5.82, p=0.01). More than 90% of the students strongly agreed/agreed that mobile phones should not be used while driving. Though 76.67% of students drive a vehicle only 52.17% among them wear helmet while driving. **CONCLUSION:** Continuous efforts are required to increase awareness on road safety measures through IEC activities to reduce the morbidity & mortality regarding Road Traffic Accidents.

**KEYWORDS:** Attitude, College students, Knowledge, Practice, Road safety measures, Visakhapatnam.

**INTRODUCTION:** Accident is defined as an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.<sup>(1)</sup> Each year nearly 1.3 million people die as a result of road traffic collision – more than 3000 deaths each day. About 90% of road traffic deaths occur in low and middle income countries, which claim less than half the world's registered vehicle fleet. Road Traffic Injuries are among the 3 leading causes of death for people between 5 & 44 years of age.<sup>(2)</sup>

Developing countries, such as India face the double burden of already existent communicable diseases and increasing burden of non – communicable diseases including Road Traffic Accidents. In the South East Asia Region of the WHO (WHO-SEARO) India alone accounted for 73% of RTA burden.<sup>(3)</sup> According to a report published by Ministry of Road

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Transport and Highways, 56 accidents occur every hour on Indian roads and at least 14 people are killed in these accidents.<sup>(4)</sup> Unless immediate and effective action is taken, Road Traffic Injuries are predicted to become the 5<sup>th</sup> leading cause of death in the world, resulting in an estimated 2.4 million deaths each year.<sup>(2)</sup>

**MATERIALS & METHODS:** This cross sectional study was conducted among college students in Visakhapatnam city during January 2015. The study participants in this study were selected from 3 colleges including one college for each profession (Medical, Engineering and Law). The sample comprised of 150 students, 50 students from each college were chosen by convenient sampling technique.

A pre tested semi structured questionnaire was administered after taking consent from the students. Data analysis was done using SPSS trial version 21. Socioeconomic Status of the participants is calculated by using Modified BG Prasad classification modification done for the month May, 2014<sup>(5)</sup>. Statistical methods used were proportions & percentages and P value <0.05 was considered statistically significant.

**RESULTS:** Among 150 students, 93(62%) were females and 57(38%) were males with majority of the students 98 (65.3%) ≤20 years of age and about 88(58.7%) participants were staying with their family. Socio demographic details of the participants are as shown in table no.1

Regarding knowledge, majority of the students have knowledge about wearing helmet & crossing the road on zebra lines as road safety measures as shown in table no. 2 & table no.3. There was difference in knowledge levels between males and females, about 67% of females had knowledge that speed limit should be followed while driving when compared to 30% of males. This difference was statistically significant (Chi square value=5.82, p=0.01). Majority of the students strongly agreed/ agreed that mobile phones should not be used while driving & regular maintenance of vehicle is essential as shown in table no.4.

In practicing road safety measures, about 66% of the participants who drive a vehicle do not talk on mobile phone while driving as shown in figure 1. And 50% of them usually maintain a speed limit of 40 – 60 KMPH as shown in figure 2.

Variable	No. of students (%)
<b>AGE</b>	
≤20	98(65.3)
>20	52(34.7)
<b>Gender</b>	
Male	57(38)
Female	93(62)
<b>Staying with</b>	
Family	88(58.7)
Hostel	62(41.3)

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<b>Socio Economic Class</b>	
I	104(69.3)
II	23(15.3)
III	13(8.7)
IV	10(6.7)

**Table 1: Socio demographic characteristics of the participants(n=150)**

<b>Sl. No.</b>	<b>Knowledge</b>	<b>Male (n=57) No.(%)</b>	<b>Female (n=93) No.(%)</b>	<b>P value [significant(S)/Not significant(NS)]</b>
1.	Wearing helmet	48(84.2)	79(84.9)	0.9(NS)
2.	Do not drive after taking alcohol	30(52.6)	33(35.4)	0.03(S)
3.	Overtaking from right side	5(8.77)	4(4.3)	0.26(NS)
4.	Speed limit should be followed	30(52.6)	67(72)	0.01(S)
5.	Do not use mobile phones while driving	30(52.6)	33(35.4)	0.03(S)
6.	Check the condition of the vehicle	13(22.8)	18(19.3)	0.61(NS)

**Table 2: Knowledge of students regarding road safety measures while using a motor vehicle**

<b>Sl. No.</b>	<b>Knowledge</b>	<b>Male (n=57) No.(%)</b>	<b>Female (n=93) No.(%)</b>	<b>P value [Significant(S)/Not Significant(NS)]</b>
1.	Walk on foot path	30(52.6)	45(48.3)	0.61(NS)
2.	Walk on left side of road	28(49.1)	46(49.4)	0.96(NS)
3.	Road crossing on zebra lines	37(64.9)	56(60.2)	0.56(NS)
4.	Do not use mobile phone while walking	10(17.5)	17(18.3)	0.9(NS)
5.	Follow traffic signals	20(35)	40(43)	0.33(NS)

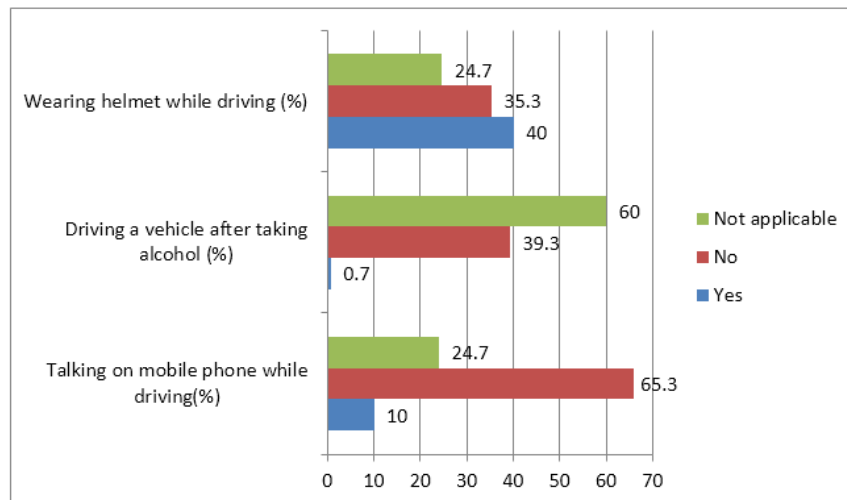
**Table 3: Knowledge of students regarding road safety measures while walking on road**

<b>Sl. No.</b>	<b>Variables</b>	<b>No. of students (%)</b>
1.	Mobile phone should not be used while driving Agree Neither agree nor disagree Disagree	142(94.7) 1(0.7) 7(4.6)
2.	Regular maintenance of vehicle is essential Agree Neither agree nor disagree Disagree	143(95.3) 4(2.7) 3(2)

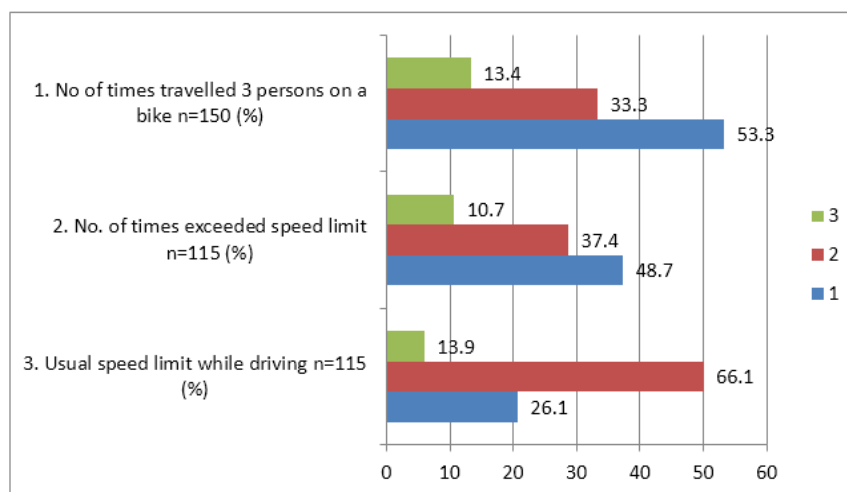
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3.	Listening to music while driving is alright Agree Neither agree nor disagree Disagree	21(14) 26(17.3) 103(68.7)
4.	Driving is safe after taking alcohol Agree Neither agree nor disagree Disagree	3(2) 2(1.3) 145(96.7)
5.	Exceeding the speed limit is safe Agree Neither agree nor disagree Disagree	9(6) 25(16.7) 116(77.3)

**Table 4: Attitude of the participants towards road safety measures(n=150)**



**Figure 1: Practice of road safety measures among participants (n=150)**



**Figure 2: Practice of road safety measures among participants (n=115)**

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(\*No. 1 & 2: 1 – Never, 2 – 1-3 times, 3 – 4 or more times).

(\*No. 3: 1 – 20-40 KMPH, 2 – 40-60 KMPH, 3 – 60-80 KMPH).

**DISCUSSION:** The present study was conducted to assess the knowledge, attitude and practice of road safety measures among college students. In the present study 67.3% of participants used their own vehicles. A study from Saudi Arabia conducted by Al-Khaldi YM<sup>(6)</sup> reported nearly 70% participants used their own vehicles. More than half of the students participating in the study were females. A study done by CKP Raj et al.<sup>(7)</sup> reported similar findings.

The overall knowledge of road safety measures was higher among males than females and these findings are similar to the observation in the study conducted by Raj et al.<sup>(7)</sup> But study done by Swamy et al in Chandigarh<sup>(8)</sup> showed that knowledge levels were higher among females.

Even though the participants have access to a very convenient public transport, they resorted to use of personal vehicles. In order to reduce the environmental pollution and save environment, the students should be encouraged to use public transport. A study conducted in Hyderabad by Dandona R et al revealed that 70% of the two-wheeler riders were not using helmets;<sup>(9)</sup> in the present study 76.67% of students drive a vehicle and only 52.17% among them wear helmet while driving.

Hijar M et al.<sup>(10)</sup> reported that risk factors for severe injuries were: alcohol intake, non-use of seat belt, age <25 years, speed > 90 km/h and occurrence at night. In the present study most of the participants belongs to this age group. And the participants were having healthy attitude towards road safety measures and practicing those safety measures will decrease their risk of exposure to Road Traffic Accidents.

**LIMITATIONS:** Because of constraints of time and logistics the study was conducted to cover only 1 college per profession.

**CONCLUSION AND RECOMMENDATIONS:** The level of knowledge regarding road safety among study participants was satisfactory. They have a healthy attitude towards road safety measures. But, regarding practice most (66.1%) of the participants were maintaining a usual speed limit of 40-60KMPH while driving which is very high. So, students should be encouraged to practice optimum road safety measures.

Repeated reinforcement in the form of lectures & health education should be undertaken in order to maintain the knowledge & practice of Road Safety Measures at an optimum level. Syllabus regarding road safety measures can be included in their academic schedule. Continuous efforts are required to increase awareness on road safety measures through IEC activities to reduce the morbidity & mortality regarding Road Traffic Accidents.

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