



A CROSS SECTIONAL STUDY ON SOCIO DEMOGRAPHIC PROFILE, BEHAVIOUR OF HELMET USAGE AND AN OPINION ON MAKING HELMET COMPULSORY AMONG COLLEGE STUDENTS IN TUMKUR DISTRICT OF KARNATAKA

Community Medicine

Dr Ashiq R Mir* SMO WHO *Corresponding Author

Dr Rajesh P Assistant Professor, Department Of Community Medicine Government Sivagangai Medical College

Dr Ganesh P PG Student, Sri Siddhartha Medical College Tumkur

ABSTRACT

Road-traffic accidents are a major cause of premature death and disability all over the world and motorized two wheelers (motorcycles/scooters/mopeds) account for the majority of such cases, particularly, in the developing countries like India. More than 1.25 million people die each year as a result of road traffic crashes.

Road traffic injuries are the leading cause of death among people aged between 15 and 29 years. The newly adopted 2030 Agenda for Sustainable Development has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by 2020. This study will contribute in spreading information about two wheeler road traffic accidents, formulation of opinion and draw attention on making helmet compulsory.

Material and methods: Students from various colleges who gave consent were included and their responses were collected with the help of questionnaire.

Results: 54 % of respondents were females. 30 % of respondents were B com students followed by 26% who were Medical students. Majority (64%) of two wheel owners did not own a helmet while 68% of helmet owners did not use helmet while riding a bike in last 3 months. Only 9% of students had experienced crash in last 1 year. Most of the (94%) students were of the opinion of making wearing helmet compulsory.

Conclusion: Many lives can be saved if helmet wearing is made compulsory as commonest cause of death following two wheeler accidents is head injury. Wearing of ISI marked helmet with jaw protector can contribute in minimizing damage in accident and awareness efforts are needed to highlight this

KEYWORDS

Helmet, two wheel accidents, RTA.

Introduction

More than 1.25 million people die each year as a result of road traffic crashes. Road traffic injuries are the leading cause of death among people aged between 15 and 29 years. 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 roads are "vulnerable road users": pedestrians, cyclists, and motorcyclists. In most countries road traffic crashes cost 3% of their gross domestic product. Without sustained action, road traffic crashes are predicted to become the seventh leading cause of death by 2030. Wearing a motorcycle helmet correctly can reduce the risk of death by almost 40% and the risk of severe injury by over 70%.¹ Although there have been recent advances in access to sophisticated trauma care and treatment of head injuries, much of the morbidity and mortality persists despite optimal use of such treatment.² Efforts for the prevention of such injuries plays a vital role in curtail the impact of it.³ It has been reported that helmets reduce the probability of the occurrence of head injuries and its severity when they occur and the probability of death in both bicycle and motorcycle crashes.³ States introducing mandatory helmet use laws have experienced a decrease in the number of both fatal and nonfatal motorcycle crashes, and States repealing helmet laws have experienced subsequent increases in motorcycle trauma.⁴ Proponents of the law have pointed out that the costs of head injuries to motorcyclists are in fact, a societal issue, because the tremendous costs of treating and caring for the patient with severe head injury are usually borne by the society.⁵

Materials and Methods:

Tumkur is considered as one of the educational cities of Karnataka state. We conducted a cross sectional study among 469 students from 4 engineering colleges, 2 medical colleges and an arts college in Tumkur city in 2015. All the final year students in the institutions who were willing to participate in the study were handed over with questionnaire with informed consent, followed by an awareness program regarding proper helmet usage and its benefits was instructed. Questions related to assess the behaviour of helmet use was obtained from the responders who own a two wheeler. Responses were entered in Excel sheet and analysed using epi info 7 and descriptive statistics were used to draw inferences. Ethical clearance was obtained from Sri Sidhartha Medical College, Tumkur.

Results:

Table 1 : Socio demographic Profile and crash details

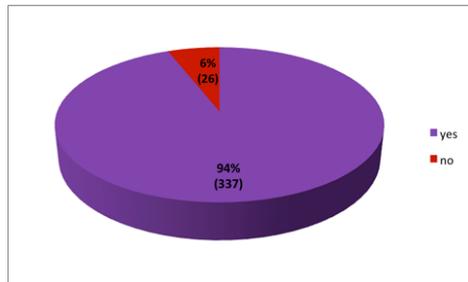
% (n=469)	
Gender	
Male	46.3% (217)
Female	53.7% (252)
Educational status	
B.Com	29.6% (139)
M.B.B.S	25.8% (121)
B.E.	22.8% (107)
B.Sc	21.7% (102)
Residence	
Hostel	51.4% (241)
Home	48.6% (228)
Crash experienced in last 1 year	
Yes	9% (42)
No	91% (427)
Two Wheeler ride in last 3 months (rider/Pillion)	
yes	67% (315)
Riders	48% (151)
Pillion	52% (164)

Table 2 : Behaviour of Helmet Use

Own a 2wheeler (n=469)	
Yes	51% (239)
No	49% (230)
Used Helmet while riding in last 3 months	
yes	32% (86)
No	68% (153)
Own a Helmet among the responders having two-wheeler (n=239)	
Yes	36% (86)
No	64% (153)
Frequency of helmet use	
Good	12% (28)
Bad	88% (211)
Type of Helmet used	
Non ISI brand without jaw protector	16% (38)
Non ISI brand with jaw protector	5% (13)
ISI brand with jaw protector	69% (164)

Non ISI brand without jaw protector	10% (24)
Strapped/Buckled while using	
Never	34% (82)
Sometimes use	19% (45)
About half time	3% (7)
Frequently	7% (16)
Always	37% (89)

Figure 1: Opinion regarding compulsory wearing of Helmet



Discussion:

This study found that 51% of respondents owned two wheeler and 32% of them used helmet while riding. A study by wadhvaniya et al showed of 35% of respondents owned two wheelers and 64% used helmet (self reported) while riding.⁶ In Our study 9% of respondents had experienced crash in last one year while in a study from south India showed 4% of accidents were of two wheel drivers. Tumkur is connected with 4 highways with high traffic route making it accident prone. This can be the reason for more accidents among two wheeler users.⁷ A study on road traffic accidents in India had suggested making helmet use compulsory and our study too had 94% respondents of the similar opinion.⁸

Conclusion:

Helmets reduce head injuries and prevent deaths as head injuries are commonest cause of fatality. Mandatory helmet legislation increases helmet use and is effective in reducing injuries, death and medical costs. The demand for standard helmets use in another key factor, increased availability of standard helmets will play a vital role in prevention of head injuries.

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