
Effects of “Use Helmet” Campaign and Helmet Laws on Helmet Use among College Students in India

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Abstract:

Victims of motorcycle accident form a high proportion of those killed and injured in road traffic crashes in India. The purpose of this descriptive study was to assess the effect of “use helmet” communication campaign and to examine various factors related to bike helmet use in a sample of seventy five college students. Data was collected from a randomly selected sample of 75 college students at Govt. College Dharamshala. Overall, the study concluded that “Use Helmet” communication campaign was helpful to motivate the motorcyclists to use the helmet. But in majority, it was the law and police that stimulated motorcyclists to wear a helmet for every riding. The absence of police checking and irritation from the helmet were the most quoted reasons by the college students for not wearing a helmet. Only a small part of the sample used the helmet for every ride. Therefore, it is an urgent need to change the attitude and behavior of motorcyclists to use the helmet regularly so that the accident death rate could be minimized in India.

Key words: “Use Helmet”, Campaign, Safety, Motorcycle, Law, Police, India

Introduction

According to global status report more than 231000 persons are killed in road traffic accidents every year in India and in which motorcyclists have 40 times higher death rate compared to other vehicle accidents. These deaths and injuries of motorcyclists are affecting every area of Indian society. It is believed that road traffic crashes are a growing health and development concerns that is affecting the country and contributing to economic losses to victims, their families, and nation as a whole, to the tune of 1-3 per cent of respective gross national product. World Health Organization (WHO) finds out that the main contributing factors of motorcycle accidents in India is the low use of helmets. Most serious or fatal injuries in motorcyclists involve the head. Evans and Frick (1988) found that helmets decreased the risk of fatal head injury by 27 percent and the chance of a serious injury up to 70%. India is witnessing rapid motorization over a period of time with nearly 70% of total vehicles being two-wheelers alone. With the Increase the number of private vehicles, the accident rate increased correspondingly. Ironically, motorcyclists are more prone to crash injuries than car drivers because motorcycles are always at the receiving end and leaving riders vulnerable to contact hard road surfaces (Ambak et al., 2009).

In the last several years, information to people about wearing helmet has been delivered by television, newspapers, wall paintings, slogans, road safety awareness campaigns and several other schemes. NIMHANS in its report, "public perceptions on road safety", concluded that helmets are important to stop the injuries and deaths, but would not drive to the amount of wearing it in the deficiency of a law (Gururaj G, 2005). The parents and peers can play a significant role on helmet use among motorcyclists and parents may be motivated through education and campaigns. Effective use of helmet among motorcyclist depends on favourable legal, social, and

awareness situations. Improved implementation might be an effective approach to raise helmet-use among motorcyclists who are attentive of its significance, (S Wadhvaniya, S Gupta¹, S Tetali, A Hyder, 2012). Several experts argue that if the law force two-wheeler drivers to wear helmet would help brought down the total of mortalities in road accidents. (Prasad Kulkarni, 2008). Therefore, there is a need to educate people about the benefits of wearing helmets and making forceful law.

Informative campaigns through media can escalate helmet use and reduce the prevalence of bicycle-related head injury, (Rivara FP1 et.al). Using a helmet can decrease the risk of death and fatal injury from a motorcycle crash (Hefny et al., 2012). It is also found that the motorcyclists who are informed by the media on helmet use they wear helmet regularly. In the last several years, several campaigns on wear helmet such as Friends for Life, Safe Chalao Citi Bajao, and Road Safety Week Celebrations have been conducted in India. The results of these campaigns are positive and significant. Road Traffic Injuries are one of the primary reasons of catastrophes, hospitalizations, disabilities and socio economic problems in India. World Health Organization research concludes that only 40% of countries have a comprehensive wear helmet law and effective helmet standards. In India, an estimated 30,000 people die in motorcycle accidents every year, however wearing helmets rates and implementation are not satisfactory, and laws leading passenger helmets are perplexing and non-existent. Several experts and researchers have found out different reasons of not wearing a helmet. The non-use of helmet has been also related with the notion and idea that use of helmet increases the risk of accidents by reducing field of vision, making discomfort, etc. (Dandona, 2005).

Mass Media channels as persuasive on helmet use, mainly television, signifying that communication campaigns may increase helmet compliance, (Siddiqui S1, et.al. 2013). Because, mass media help to establish belief for public and

motivate them to think and increase their knowledge to change habits (McComb and Shaw 1972. On the other hand, strict law on motorcycle helmet is required in order to tackle the problem concerning the inadequate behaviour of wearing helmet among the motorcyclists. But changing their attitude and behaviour is not an easy task because they are still under the influence of their family (Mohamad Baharin Ahmed, et.al.) 2013. Efforts to encourage helmet use have been done through educational and enforcement strategies. Helmet use also increases with education. It is found that illiterate motorcyclists are by around 10% less likely to wear a helmet than literate bike riders (Michael Grimm and Carole Treibich, 2014). The significant reasons concerning the lack of using helmet is heaviness and harassment, (Medhati, Mostafa; Moghadami, Mohsen; Hadizadeh, E, 2010).

Problem statement

In a country where 75 % of vehicles are two wheelers and a large number of motorcyclists killed in a year it is believed that 80% deaths and injuries can be reduced if drivers use the helmet regularly. Therefore, it is essential to find out the factors influencing motorcyclists' behavior and attitude of not wearing helmet in every ride.

The loss to the Indian economy due to causalities and accident injuries is estimated at 3 per cent of GDP (A.K.Upadhyaya, Secretary, Road Transport and Highways). Over 90 per cent of road traffic deaths and injuries occur in low-income and middle-income countries, which have only 48 per cent of the world's registered vehicles (World Health Organisation). The young people aged between 15-29 years - have become the main victims of injuries and deaths. Study conducted by NIMHANS explained that the helmet use rate has increased from less than 5% in 2005 to 60% by 2008 in Bengaluru due to a number of education programmes and

media campaigns which were undertaken to deliver information for public to wear helmets.

Therefore, this study was aimed to investigate the effect of use helmet campaign and helmet laws and factors affecting college students' behavior and attitude not wearing a safety helmet.

Related Literature

Whittam et al., (2006) in their study identified that all forms of mass media were effective to disseminate the campaigns to reach out the public. They also argued that mass media communication campaigns had medium and long term impacts on attitudes and behaviours of people but it took several years to appear. A similar study examined accidents over a six year period but found only short term impacts limited to the period of the campaign.

Besides traffic instructions and driver training, public information is a part of the wider field of traffic education. Public information about hazardous behaviour is defined as a methodical communication activity that aims at motivating people or helping them to behave positively or safely (Brug et al., 2008). A study conducted by Penprapa Siviroj , Karl Peltzer, Supa Pengpid and Sompong Morarit (2012) concluded that the awareness communication campaign has a slight positive impact on increasing helmet use among motorcyclists. The researchers also claimed that motorcyclists who had a lower exposure to road safety awareness campaign were more probably not to use a helmet frequently compared to a higher exposure to road safety awareness campaign. Emmanuel Geoffrey Mwakapasa (2011) in his study indicated that there was a positive attitude among motorcyclists towards helmet use. He found that helmet use was associated with the level of awareness and education.

Pendergrast RA, et. al., (1992) investigated that the

level of helmet use had been increased due to parents' education and positive attitude of wearing helmet among motorcyclists. A similar cross-sectional study conducted by Sreedharan J, et.al. (2010) found a significant association between the helmet use and marital status, gender, drunken driving, alcohol use and attitude towards implementing traffic law. M. Papadakaki G. et, al., (2013) conducted a study on 405 riders aged 19–65years from three cities of Crete to find the barriers and facilitators of helmet use. They discovered that continuous education plan and strengthening of law enforcement could be effective in increasing the use of helmet among motorcyclists.

Therefore, this study was aimed to find out the effects of Use helmet campaign and factors affecting why most college students are not use a safety helmet.

Imran Khan et al. (2008) researched that frequency of wearing a helmet was associated with information and education. The study also observed that the main factors for not wearing a helmet among the motorcyclists were physical inconvenience and discomfort. As Radin Umar et al. (1998) stated in their study that campaign was helpful to reduce the motorcycle accident deaths in the area where they studied the impact of campaign. Whereas Jiwattanakulpaisarn Piyapong (2012) found that the rate of wearing motorcycle helmets was marginally higher after the campaign, only 46% from 44%. He also found that after the nationwide campaign on use helmet, the helmet use rates were very low. He suggested reviewing and improving the current approaches of promoting helmet use through education and enforcement.

Research Questions

1. Is there any effect of “Use Helmet” communication campaign to increase helmet use among college students?

2. Why motorcyclists do not wear a helmet for every ride.
3. Information or enforced law: which one is more important to increase helmet use?

Study area and sampling plan

In India, college students are heavy users of two wheelers particularly the motorcycles and are also a vulnerable group to road accidents. Along with their age growth, they are inevitably exposed to roads out of their homes. Because of the highest death rate of motorcyclists in district Kangra, the Govt. P.G. College Dharamshala, the oldest college of the state and most populated by strength wise, was chosen for the study. A sample of 75 college students who had any type of two wheelers was administered randomly.

Data collection method

An audience survey was conducted to collect the data. Firstly, the important questions were framed and then a questionnaire of 34 questions in English was distributed to the motorcyclists between 9:30 to 10:30 am. For escaping a sample error, the data was collected at the parking of the college. All the questions in the questionnaire were close ended. During the study it was observed that 84% motorcyclists entered in the college without a helmet.

Data Analysis Technique

The collected data was analyzed with the help of SPSS IBM 20.0 descriptive tool. Firstly, the collected data was entered in SPSS software and then analyzed with frequency application/command.

Results of the study

Table 1.

Statistics							
	Frequency of riding	Frequency of wearing a helmet for every riding	Reason of wearing a Helmet	Awareness about "Use Helmet" Campaign	Factors associated with not wearing a helmet for every ride	Reason of starting wearing a helmet	Police checking in the past three months
N	75	75	75	75	71	75	72
Valid	0	0	0	0	4	0	3
Missing							

Table 2. Frequency of Riding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	68	90.7	90.7	90.7
	Twice in Week	6	8.0	8.0	98.7
	Once in Week	1	1.3	1.3	100.0
	Total	75	100.0	100.0	

The above table shows that about 91% of college students ride their bike every day. Riding twice in week and once a week is the minimum frequency of riding a bike among college students.

Table 3. Frequency of Wearing a Helmet for Every Riding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.3	1.3	1.3
	Always	25	33.3	33.3	34.7
	Sometimes	49	65.3	65.3	100.0
	Total	75	100.0	100.0	

Majority of Motorcyclists (65) did not use their helmet frequently while only a small population of sample (33%) used their helmet always.

Table 4. Factors Associated with Wearing a Helmet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	For safety Purpose	32	42.7	42.7	42.7
	Escaping from police fine	18	24.0	24.0	66.7
	Encouraged by Parents	6	8.0	8.0	74.7
	Helmet protect head if fall off bike	8	10.7	10.7	85.3
	Helmet could save life	11	14.7	14.7	100.0
	Total	75	100.0	100.0	

The results of the table no. 4 demonstrated that 42% of sample used the helmets for their safety purpose whereas 24% used helmet for escaping from police fine. Only 8% motorcyclists used the helmet due to encouragements of their parents. About 14.7% students wear the helmet because they know it could save their life.

Table 5. Knowledge about "Use Helmet" Campaign

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	75	100.0	100.0	100.0

The slogan "Use Helmet" has become very popular in India. The survey results displayed that cent per cent of the sample had the knowledge about the "use helmet" campaign.

Table 6. Factor associated with not wearing a Helmet for every ride

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Helmet irritates my head	12	16.0	16.9	16.9
	No fear of Police	13	17.3	18.3	35.2
	People do not identify me in Helmet	5	6.7	7.0	42.3
	Helmet is annoying to store in College	4	5.3	5.6	47.9
	I don't have a helmet	6	8.0	8.5	56.3
	Helmet Mess my hair	12	16.0	16.9	73.2
	Not applicable	19	25.3	26.8	100.0

	Total	71	94.7	100.0	
Missing	99.00	4	5.3		
Total		75	100.0		

The top reasons for not wearing helmets were that the Motorcyclists (18%) do not have a fear of Police while 16% said the helmet mess their hair. Other 16% of sample did not wear helmet because of helmet irritate their head. Some other reasons such as people did not identify them in helmet, annoying to store helmet, availability of helmet, were also expressed by the respondents.

Table 7. Reason of starting wearing a Helmet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	After the death of a close motorcyclist	7	9.3	9.3	9.3
	After fined by Police	20	26.7	26.7	36.0
	After hearing of "Use Helmet" campaign	25	33.3	33.3	69.3
	Fear of Police	9	12.0	12.0	81.3
	Strictness of the Parents	14	18.7	18.7	100.0
	Total	75	100.0	100.0	

There are various factors which are associated to begin wearing a helmet among the students. According to the 26% of sample they started wearing a helmet after punishment/ fined by the police for not to wearing a helmet. While 33% respondents said they started use the helmet when they knew about the “Use Helmet” campaign. Parents also can play a positive role to stop head injuries and deaths. About 18.7% motorcyclists accepted that they used the helmet because of the strict guidance of their parents. Fear of police and death of a close person who had not wear a helmet were also some motivating factors to started using a helmet in students.

Table 8. Police checking in past three months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 Times	33	44.0	45.8	45.8
	2-3 Times	9	12.0	12.5	58.3
	4-5 Times	13	17.3	18.1	76.4
	Never	17	22.7	23.6	100.0
	Total	72	96.0	100.0	
Missing	99.00	3	4.0		
Total		75	100.0		

As it was found that the fear of police could contribute to reduce the head injuries and deaths in motorcyclists, 44% sample admitted that they were stopped by police 1-2 times in past three months. However, 22.7% accepted that they were not checked by police in past three months. 17.3% people were checked by 4-5 times by police in the past three months.

Discussion

The study was conducted to find the answers of three research questions. The results of the study confirm that the “Use Helmet” communication campaign is helpful to some extent to increase helmet use among college students. But overall law is more effective than campaign to change motorcyclists’ attitude to influence them to wear the helmet. Among other factors, strictness of parents and death of a close motorcyclist person also force them to start using a helmet. Therefore, it is emphasized that information and awareness is not the only factor to force the motorcyclists to wear a helmet.

The study also support the result of A. Carlson Gielen et al. (1996) that the presence of a law, media campaign, children's use of helmets are linked more with social apprehensions than with parental influences, such as beliefs about the necessity for helmets. A widespread implementation of helmet laws and communication campaigns should be encouraged. Despite cent percent awareness about the

campaign of helmet use, motorcycle helmet use is not regular. Abdulgafoor M. Bachani et al., (2013) in their study also suggested that there are many misconceptions regarding helmet use, including that they are not necessary for short travelling, at low speeds, and other physical and psychological incapability happen due to helmet use. These factors create barrier to helmet use among students. If these obstacles are solved and coupled with visible and regular implementation, may considerably decrease the number of motorcycle-related injuries and deaths.

Conclusion

There are more motorcyclists on the roads than ever in India, and the issue of their safety is becoming more significant. Although “use helmet” campaign is effective to escalate the numbers of helmet use among motorcyclists but it is not the only way to reduce the head injuries and deaths of motorcyclists. The study concludes that fear of police and strictness of parents could play a very effective and significant role to minimize the threat. In general, study also discovers that helmet-use laws and campaigns are consistently associated with lower the rates of deaths. The study support the suggestions made by Alkistis Skalkidou (1999) that a multipronged campaign is helpful and needed to increase of helmet use in motorcyclists. The communication campaign should comprise not only law and police enforcement but also initiatives to make helmets more convenient to wear.

Limitations of the study

The study was focused on a sample of college students. Results may differ when study will include sample from other population. A small sample in the study was another limitation of the study. For better results theory of mass media may be

useful so there is limitation of theoretical framework. Finally, some more important research questions are needed to be included and answered.

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