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FREQUENCY OF HELMET USE AMONG MOTORCYCLE RIDERS IN RAWALPINDI

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ABSTRACT... babarmumtaz41@hotmail.com. **Objective:** To find the frequency of helmet use as a safety tool and to investigate how many of the motorcyclists are aware of the beneficial effects of using a helmet. **Design:** A cross sectional study. **Place and Duration of Study:** In Community Medicine Department of Foundation University Medical College, Rawalpindi from March 2007 to September 2007. **Material and Methods:** A total of 1000 questionnaires were randomly distributed among motorcyclists during visits to Lalkurti, Saddar and Karchi chowk in Rawalpindi. Inclusion criteria included those motor bike rider volunteering to participate in the study. 44 responses were invalid and the total valid responses were therefore 956. No incentive was offered for participation in the study and no individual follow-up was possible. **Results:** From a total sample size of 956 riders 541 were putting on a helmet and 415 were without the helmet. The frequency of helmet use was therefore 56.6% and that the use non user is 43.4%. A bog majority i.e 80.7% of the respondents left that use of helmet while riding a motorbike should be mandatory while only 19.3% left that it should be the discretion of the riders. 57.6% of the riders left that in case of pillion riding both the riders should put on the helmet while 42.4% did not support the idea. **Conclusion:** The study implies that we need to enact and enforce policy intervention for mandatory use of helmet, effective traffic law enforcement and imparting awareness among our masses especially the younger generation to reduce Road Traffic Accidents. Print and electronic media should be utilize extensively to disseminate basic traffic knowledge at all levels of the society.

Key words: Helmet, Motorcyclist, Road Accident

INTRODUCTION

Road traffic accidents (RTAs) are a major cause of disability and death all over the world particularly the developing countries. World Health Organization (WHO) has recognized RTAs as a major problem. WHO projects HIV/AIDS, Unipolar depressive disorders, Ischaemic heart disease and Road traffic accidents to be the four leading causes of burden of disease by the year 2030¹.

Motorcycle injuries and mortality are different in different countries depending on the use of a helmet². In Pakistan thousands of people die every year as a result of road traffic accidents. A huge number of these deaths take place among motorcyclists riding their bikes without helmets. Studies show that countries where the use of helmet is not mandatory or if this rule was repealed the number of fatal injuries or death due to it increased many fold³. In Pakistan the use of helmet is a mandatory for motorbike riders however poor compliance is a major problem and is a failure on the part of the traffic police.

Pakistan is the second largest country in the South Asian region with a population of 160 million. It faces all the problems being faced by rapidly developing countries especially increasing motorization. It has been established that the most common cause of head injury in road traffic accidents involved a motorcycle incident and motorcycle accident injured patients in majority of the cases are young males⁴. Helmet provides adequate protection, reduces severity of injury as well as medical cost.

The use of helmet as a protection gear was realized as early as 1939 but it was in 1967 that motorcycle crash helmets were made compulsory in the United Kingdom⁵. The economic impact of helmet use and helmet laws however remains controversial. Previous studies of injured motorcyclists suggest a marginal inpatient hospital cost difference between helmeted and un-helmeted riders⁶. This still needs to be explored further. Opponents believe negative findings are a result of

biased statistical analyses that fails to account for the impact of alcohol and drugs⁷.

MATERIAL AND METHODS

This cross sectional study was conducted by the Community Medicine department of Foundation University Medical College. The objective was to find the frequency of helmet use as a safety tool and to investigate how many of the motorcyclists are aware of the beneficial effects of using a helmet. Inclusion criteria included those motor bike riders volunteering to participate in the study. One thousand questionnaires were distributed randomly among motorcyclists at Lalkurti, Saddar and Karich chowk. Questionnaires required less than 10 minutes to complete and return individually. No incentive was offered for participation in the study and no individual follow-up was possible.

The questionnaire inquired about age, sex and education of the rider. They were asked if they use a helmet, 'YES or NO'. All riders were asked to identify from a list of given options the reason for putting on or not putting on a helmet. Motorbike riders were asked whether helmet use should be mandatory for them and for the person sitting on the rear seat. The questionnaire also inquired about the need to impart awareness among motorbike riders regarding the beneficial effects of using a helmet. Some of the responses were or if the response was unidentifiable and if the response was outside the scope. 44 responses were invalid and the total valid responses were therefore 956.

RESULTS

The analysis of the data revealed that the age of the riders ranged from more than 10 to above 60 years (Figure 1). Maximum number of motorcycle riders had their education till inter 32.85% followed by matriculate 32.45% (Table I).

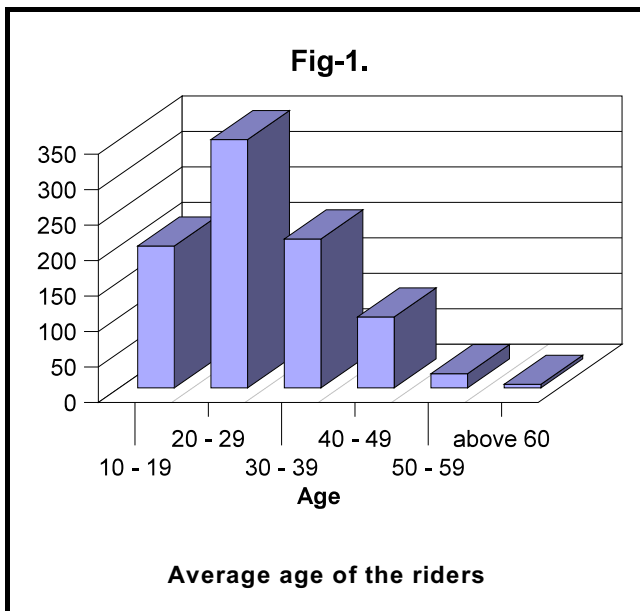


Table-I. Education of the riders

Education	%age
Illiterate	4.7%
Middle	8.4%
Metric	32.45%
Inter	32.85%
Bachelor	12%
Masters	8.8%
Above Masters	0.8%
Total	100%

Table-II.

Reasons for use of helmet	Protects in case of accident	It is for my own safety	Save me from traffic police	Protects from cold and rain	No reason
	36.7%	44.7%	12.2%	2.9%	3.5%
Reasons for non use of helmet %age	Helmet is very expensive	No help in case of accident	Looks awkward and clumsy	Hampers my riding ability	No reason
	10.4%	18.1%	16.2%	25.6%	29.6%

Table-III.

Use of helmet should be mandatory	Yes		No	
	80.7%		19.3%	
Reasons for supporting the mandatory use of helmets by those saying Yes	Reduces morbidity and mortality in case accident	Mandatory in most developed countries	Very dangerous to ride bike without helmet	No reason
	62.7%	12.1%	23.9%	1.3%
Reasons for not supporting the mandatory use of helmets by those saying No	It is my own choice	Useless to use a helmet	Traffic police cannot ensure implementation even if made mandatory	No reason
	44.3%	38.9%	10.8%	6%

	Yes		No	
In case of pillion riding should both riders use helmet	57.6%		42.4%	
How best to avoid accidents	Enforce strict speed limits	Stringent traffic discipline	Mandatory helmet use	Don't know
	29.4%	28.1%	6.7%	35.8%
Traffic awareness be imparted among riders	Yes		No	
	84.3%		15.7%	

From a total sample size of 956 motorbike riders 541 were putting on a helmet and 415 were without the helmet. The frequency of helmet use in Rawalpindi is 56.6% and that of non users is 43.4%. Those who were putting on the helmet were further asked to identify one reason for using the helmet and a maximum of 44.7% said that they use it as it is for their own safety. The riders that were not putting for not using a helmet and a maximum of 29.6% opted for the last option i.e.'no reason' (Table II).

A big majority i.e 80.7% of the respondents felt that the helmet while riding a motorbike should be mandatory while only 19.3% felt that it should be the discretion of the riders. Those who supported the idea of mandatory use of the helmet were further asked why it should be mandatory. 62.7% said that it helps in reducing morbidity them a maximum of 44.3% said it is their own choice (Table III).

57.6% of the riders felt that in case of pillion riding both the riders should put on the helmet while 42.4% did not support the idea and a big majority 84.3% felt that awareness should be imparted among the riders regarding the use of helmet (Table IV).

DISCUSSION

Motorize two-wheeled vehicles account for a large proportion of road traffic in Pakistan and the riders of these vehicles have a high risk of road injuries. During the last few years there has been a phenomenal increase in the sale of motorcycles in Pakistan and at the same time there has been no increase in the expenditure

on road safety⁸.

The frequency of helmet use (56.6%) in a city like Rawalpindi would have been still lower keeping in view the fact that when this data was collected traffic police were in full swing to ensure helmet law compliance. Unfortunately these laws are not enforced with the same vigor and enthusiasm throughout the year. A study conducted in America revealed that failure to wear helmet decreases mean cost of hospitalization by more than US 6000 dollars per patient⁹.

Our study shows that riders who were not using a helmet out of them 25.6% said that it hampers their riding ability. Previous studies reveal that motorcyclists also complain of warm weather and reduced view due to the existing designs of helmets in Pakistan⁸. Research needs to be done to create a better design that is lesser in weight and affordable to the masses. Another important finding of the study is that 16.2% of the riders do not use helmet because they feel it looks awkward and clumsy. People need to be educated that helmet is for their own benefit and safety. A study published that use of helmets decrease head injuries by 85% and brain injuries by 88% for cyclists¹⁰.

An encouraging finding of the study is that 80.7% of the riders felt that the use of helmet should be mandatory while only 19.3% did not support the idea. This finding is very important as it gives an idea regarding the aptitude of the riders. As in the case of Taiwan only 21% of the motorcyclists used helmets before the strict enforcement of the motorcycle helmet law however this number

increased drastically to 96% in Sep 1997 after the stringent implementation of the law by the traffic police¹¹.

If we compare the results of our study with other studies regarding frequency of helmet use we find that our frequency levels are higher than most of the developing countries but we lag far behind once we compare them with developed countries. In Tehran, Iran the frequency was only 8.6% in a study conducted in 2006¹². In India frequency of helmet use was found to be 31% in a study conducted in Hyderabad¹³. A similar type of study in Vietnam revealed that helmet use was only 29.94%¹⁴. In Greece the overall helmet use was 20.2% ranging from 9.8% on small roads to 50.8% on highways¹⁵. In Thailand a study revealed that helmet use compliance is about 50%¹⁶. The rate of helmet use in Londrina, Southern Brazil was 63.2¹⁷. A survey conducted in Italy revealed that only 34% motorcyclists practiced regular helmet use¹⁸. In America despite overwhelming epidemiological evidence that motorcycle helmet laws reduce fatalities and serious injuries only 20 states currently require all riders to wear helmets¹⁹. Due to this motorcycle injuries and mortality in America are different as helmet use varies greatly depending on state laws. Helmet use is higher in New York i.e 91% and only 18% in Connecticut². Helmet use in Florida is nearly 100%²⁰. In Taxes, when helmet use was made compulsory for all motorcycle operators and passengers the helmet use increased from less than 50% just before the law to 90% immediately after and it increased further to more 95% two months after²¹.

Conclusion: We need to inculcate knowledge regarding traffic rules and regulations in our curriculum with the objective to impart awareness at a younger age. The government also must ensure provision of better facilities for the traffic police to guarantee the implementation of the traffic rules at all levels. More studies are needed to be conducted to ascertain the causes of the enormously high levels of Road Traffic Accidents in Pakistan and how best to prevent them. We need to act and act quickly to save precious lives. As a first step the government can strictly enforce helmet use with non stop consistency by all the motorcyclists which will save

thousands of precious lives.

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