

DISCUSSION AND CONCLUSION

Similar to present study, WHOQOL-BREF has illustrated good discriminant validity in past studies too^{9,10}. In our study, the instrument exhibited good discriminant validity in terms of age, gender, school type and family income particularly in psychological domain that could significantly discriminate across all four variable categories. HRQoL in physical domain remained almost constant with increasing age whereas in psychological domain HRQoL declined as the age progressed which has been reported previously in adolescent populations^{3,11}.

Variation of HRQoL with gender is varied in different studies. Our findings show that female adolescents perceived a significantly higher HRQoL in psychological and social relations domain, which has also been observed by other studies^{3,5}. However, some studies do not support this observation^{4,10,11} and report better HRQoL for males. Thus, this finding needs further research to explain the pattern of HRQoL between genders for different age-groups as well as clarifying the role of construct of HRQoL instrument in explaining gender differences³. Analysing gender differences in HRQoL perceptions are necessary to study variations in self-esteem as a result of differing social roles which has a high bearing on HRQoL⁴.

Similar to previous studies on school-going students, attending a private school rather than a public school was found to be indicative of enhanced HRQoL⁵. However, variation in HRQoL across increasing income categories was unclear in our study. The existing literature on variation of HRQoL with increasing income or SES is also varied.

Higher income may enhance standard of living but this may not necessarily be synonymous with a higher HRQoL as increased material wealth without happiness is not HRQoL. Research has shown that above a certain level, income does not contribute much to increased HRQoL and contrarily may even show a diminishing effect on HRQoL^{3,5} especially mental health¹² or may have no association with HRQoL¹³. These findings have implications for developed and developing countries indicating that mere focus on economic development without emphasis on improvement of HRQoL of populations will not suffice³.

HRQoL studies on adolescents are needed to assist in bringing out the adolescent's self-perception across several dimensions of their life and contribute in understanding and monitoring adolescent's HRQoL over a period of time². This can facilitate researchers and health practitioners to help adolescents with acute and/or chronic dysfunction or identify those who are prone to developing psychosocial difficulties in future. Furthermore, as HRQoL is cumulative i.e. problems in early childhood and adolescence can accumulate and affect adulthood, thus focusing on adolescent's HRQoL can be an effective measure to prevent their vulnerability for poor HRQoL in adulthood^{2,5}.

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An Evaluation of Awareness Levels and Attitude towards Road Traffic Rules among Vehicle Users.

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INTRODUCTION

Road Traffic Accidents (RTA), referred to as human error-induced accidents, earlier known as unnatural cause of deaths, have largely outnumbered deaths due to natural calamities¹. RTA are a leading cause of death and injury worldwide. By 2020, World Health Organization (WHO) projects road traffic injuries to be the third highest cause of deaths globally². The highest proportion of RTAs are concentrated in low and middle income countries, out

of which 85% road traffic deaths occur in developing countries. The South-East Asia Region ranks third among the six WHO regions with a rate of 16.6 road traffic injuries per 100 000 population.

While 20,000 people died in natural calamities across India in 2014, human errors claimed 316,828 lives, out of which majority (about 170 thousand) were due to RTA¹. The most crucial reason for the increasing RTA is the lack of awareness about road safety among road users which has intensified the problem to a huge extent.

To devise public health strategies for increasing adherence to road traffic rules in public, it is of prime importance to first evaluate the existing levels of awareness and attitude towards traffic rules. Hence,

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the present study was designed to assess the awareness levels about road traffic rules among two and four-vehicle users visiting the Out-Patient Department (OPD) of a large government hospital in the state of Uttar Pradesh. The responders were also interviewed about their practices regarding the use of preventive measures and possible reasons for not using safety measures during vehicle use.

METHODS

Study design and setting: This descriptive study was conducted by interviewing the patients and their relatives visiting the Out-patient Department (OPD) and those who were using a two or a four wheeler vehicle. The study was conducted at Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), Lucknow (UP) during May-July'2014.

Instrument: A 23-item questionnaire was designed for the study on the basis of the most common issues relevant to road traffic discipline. In the present study the term 'vehicle users' includes drivers, vehicle owners, pillion riders and accompanying passengers. The questions were related to awareness of some of the important road traffic rules; driving practices and attitude of vehicle users towards driving. Baseline data pertaining to age, gender, education, occupation, marital status and type of vehicle owned was also collected. Out of 23 questions, 9 were related to 'awareness about driving rules and signage' which were evaluated on the scale: allowed / not allowed / not sure. The remaining 14 questions were related to 'driving practices and attitude towards road safety' scaled on: 'never / rarely / always' as practiced by the driver or the vehicle user.

Study procedure and analysis: All the patients and relatives visiting the OPD of SGPGI who were using a 2-wheeler or a 4-wheeler vehicle were requested to participate in the study. Those who consented for participation were requested to provide the baseline data and complete the questionnaire. For missing data, responders were followed up once telephonically for providing missing data. Questionnaires with more than 10% blank questions were excluded from analysis. The baseline information as well as the responses to questionnaires was summarized. Continuous variables were analyzed through measure of central tendency and discrete variables were summarized.

RESULTS

500 two-wheeler and 500 four-wheeler users (n=1000) were requested to participate in the study and all of them consented to participate. None of the forms had missing data hence all forms were included. Mean age of the sample was 38.1±14.12 years (min. 18 to max. 72 years). Baseline characteristics of the sample are presented in table 1.

As is evident from the results, majority of vehicle users (39%) were in the age range 18-30 years followed by 31-45 years (35%). This indicates that most of them were in young or middle aged population group. The striking finding is that 90% were males. Further, around a quarter respondents felt that traffic police was responsible for their road safety. This is more of an attitudinal issue as the vehicle users must have a sense of self responsibility for their road safety.

All the vehicle users were interviewed to evaluate their awareness for some of the driving rules. As per the existing Road Traffic rules, the vehicle users were asked to respond if certain practices are allowed or not. The results are shown in Table 2. As the frequency of responses was similar for 2-wheeler and 4-wheeler users, the combined results

are presented here.

As can be seen from table 2, on one hand 65% responders knew that driving under alcohol influence is not allowed, another 31% were unsure regarding the relevant laws. The responders said that they were unsure of the permissible blood levels of alcohol whereas, around 4% said that it is allowed. Similarly, around 50% responders said that they are not sure if mobile phones are allowed during vehicle use as they usually use the phones in speaker mode. Another 11% responders said that probably it is allowed if used 'safely' as they have never been caught by police for doing so. The results show similar trends for other factors also like driving without a license, overtaking from left and not wearing seat belt or helmet. These results strongly indicate that the awareness about the common road traffic rules is not high.

Frequency of responses related to driving practices of 2-wheeler and 4-wheeler users are shown in table 3.

Table 1: Baseline characteristics of study participants

Sr. No.	Variables	Two-wheeler users (n=500)	Four-wheeler users (n=500)	Total (N=1000)
1	Age Group			
	18-30 years	204 (40.8%)	182 (36.4%)	386 (38.6%)
	31-45 years	158 (31.6%)	194 (38.8%)	352 (35.2%)
	46-60 years	128 (25.6%)	94 (18.8%)	222 (22.2%)
	>60 years	10 (2%)	30 (6%)	40 (4%)
2	Gender			
	Male	450 (90%)	460 (92%)	910 (91%)
	Female	50 (10%)	40 (8%)	90 (9%)
3	Residence			
	Rural	194 (38.8%)	172 (34.4%)	366 (36.6%)
	Urban	306 (61.2%)	328 (65.6%)	634 (63.4%)
4	Occupation			
	Government/private/contractual service	272 (54.4%)	290 (58%)	562 (56.2%)
	Business/self-employed	108 (21.6%)	124 (24.8%)	232 (23.2%)
	Retired	14 (2.8%)	18 (3.6%)	32 (3.2%)
	House wives	16 (3.2%)	4 (0.8%)	20 (2%)
	Students	90 (18%)	64 (12.8%)	154 (15.4%)
5	Education			
	< Grade 10 th	134 (26.8%)	114 (22.8%)	248 (24.8%)
	Grade 10 th – Graduation	158 (31.6%)	112 (22.4%)	270 (27%)
	> Graduation	208 (41.6%)	274 (54.8%)	482 (48.2%)
6.	Whose responsibility is your road safety?			
	Self	238 (47.6%)	253 (50.6%)	491 (49.1%)
	Municipal Corporation	112 (22.4%)	56 (11.2%)	168 (16.8%)
	Traffic police	110 (22%)	143 (28.6%)	253 (25.3%)
	Other fellow drivers	40 (8%)	48 (9.6%)	88 (8.8%)

Table 2: Awareness about road traffic rules

Sr. No.	Criteria	Allowed	Not allowed	Not sure	Total
1	Drunken Driving	36 (3.6%)	653 (65.3%)	311 (31.1%)	1000
2	Speaking on hand held mobile phones while driving	111 (11.1%)	403 (40.3%)	486 (48.6%)	1000
3	Driving beyond permissible speed limit	94 (9.4%)	575 (57.5%)	331 (33.1%)	1000
	Carrying more than allowed number of passengers	81 (8.1%)	622 (62.2%)	297 (29.7%)	1000
6	Driving without a driving license	20 (2%)	689 (68.9%)	291 (29.1%)	1000
7	Overtaking from Left side	387 (38.7%)	420 (42%)	193 (19.3%)	1000
8	Driving two-wheeler without a helmet	106 (10.6%)	351 (35.1%)	43 (4.3%)	500
9	Driving four-wheeler without a seat belt	56 (11.2%)	372 (74.4%)	72 (14.4%)	500

Table 3: Driving practices: Attitude towards Road safety

S.No.	Frequency in Driving practice	Never	Rarely	Always	Total
10	Following traffic signals even in absence of traffic police	110 (11%)	314 (31.4%)	576 (57.6%)	1000
11	Following traffic signals at night	198 (19.8%)	371 (37.1%)	431 (43.1%)	1000
12	Slowing down/blowing horn at crossroads	161 (16.1%)	285 (28.5%)	554 (55.4%)	1000
13	Driving beyond permissible speed limit	464 (46.4%)	379 (37.9%)	157 (15.7%)	1000
14	Carrying driving license/vehicle documents while driving	84 (8.4%)	312 (31.2%)	604 (60.4%)	1000
15	Driving on footpath	685 (68.5%)	283 (28.3%)	32 (3.2%)	1000
16	Using side indicators/hand signals	46 (4.6%)	231 (23.1%)	723 (72.3%)	1000
17	Using dipper at night	36 (3.6%)	242 (24.2%)	722 (72.2%)	1000
18	Overtaking from Left side	294 (29.4%)	654 (65.4%)	52 (5.2%)	1000
19	Do you feel helmet/seat belts prevent injury during accidents	398 (39.8%)	258 (25.8%)	344 (34.4%)	1000
20	Not wearing a helmet while driving two-wheeler	69 (13.8%)	181 (36.2%)	250 (50%)	500
21	Not wearing seat belt while driving four-wheeler	42 (8.4%)	205 (41%)	253 (50.6%)	500
22	Carrying more than 2 persons (on two wheeler)	122 (24.4%)	302 (60.4%)	76 (15.2%)	500
23	Carrying more than 4 persons (on four wheeler)	109 (21.8%)	307 (61.4%)	84 (16.8%)	500

In the context of the driving practices (table 3), a fair proportion of respondents said that they always followed the rules like traffic signals, maintaining speed limit, not driving on footpath and so on. Some striking findings are that around 14% responders never wear a helmet and around 9% do not have a seat belt in car. Further, 15-18% responders always carry more than the allowed number of passengers on two as well as four wheelers. This is also corroborated by the finding that around 40% vehicle users feel that helmet/seat belts never prevent injuries during accidents. Hence, the reluctance exists as it is seen just as a cost burden to buy helmet or install seat belt in the cars.

DISCUSSION AND CONCLUSION

The present study was conducted to assess the awareness about road traffic rules and the attitude of vehicles users toward their driving practices. We found that awareness regarding common rules was moderate and the attitude towards driving practices also needed immense changes. Majority of the vehicle users were male and large proportion were in young or middle age. RTAs is one among the 3 leading causes of death in this economically productive age group with a male preponderance³⁻⁵.

Further, attitudinal issues were identifiable as a quarter of responders opined that their road safety is the responsibility of traffic police. Probably it is this lack of self-responsible behavior which reflects in the low usage of safety precautions and flouting traffic rules. With increasing number of vehicles, the responsibility of safety issues is largely attributed to government and traffic police which is reflected in previous studies also³.

With increasing purchasing power and improving economy, the number of motor vehicles also increases. Hence, probability of deaths and injuries from traffic accidents are also likely to increase as motorized traffic competes with slower moving non-motorized traffic for road space. The contributing factors include speeding, drunken driving and lesser use of helmets, seat belts and child restraints in vehicles⁶.

Further, the respondents were partially aware about the common traffic rules like drunken driving, using mobile phones, carrying a license and using seat belt/helmet. It is worrisome to know that the vehicle users are unsure if driving under the influence of alcohol is allowed or not. The reason being quoted is that they are not sure of the amount of alcohol intake. Similarly, another indication of the mindset is that they have never been caught by traffic police while using mobile phone on speaker mode. Hence, they are not sure if it is allowed or not. These findings indicate the unawareness of vehicle users

regarding basic road safety rules. The previous studies indicate the opposite that adoption of safety measures goes a long way in enhancing safety of vehicle users³. Further, mobile phone usage is also a contributing factor in RTAs⁴ about which awareness was fair in our study.

With regard to the driving practices, majority of the responders said that they follow traffic rules. However, fair proportion of them did not use helmets/seat belts. The responders were of the opinion that these safety devices do not prevent injuries during an accident and just add to additional cost. Hence, the attitudinal barriers are too many as the prevention equipment are considered to be additional costs. Previous studies support the fact that not wearing helmets makes one more prone to RTA, however, a large number of them do not use helmets nor carry a driving license⁵.

A model on educating drivers and vehicle is needed which uses 3 criteria namely, Knowledge and skills, risk increasing aspects and self-assessment⁷.

Road safety is a major public health concern. In India, where 65 % of the population is young, it is imperative to create awareness, adopt strict measures and execute actions to ensure near perfect road safety of its citizens. Moreover, the health of the Nation is more important than wealth of the nation. So, close monitoring of the laws and its implementation should be a high priority of local, state and central authority with an aim to reduce road accident injuries and fatality. Inducing discipline among the drivers to be followed while on road must be initiated, this will in long run ensure reduction in no. of road traffic accidents and deaths.

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JIMSA TRAVEL GRANT AWARD 2105 DECLARED

The following papers presented at IMSA's Annual Conference IMSACON 2015, Calicut, Kerala have been adjudged by the Conference Scientific Committee for the award JIMSA Travel Grant for the year 2015:

- Dr. G. S.Prabudoss:** APOLLO SPECTRA HOSPITALS, Chennai, Tamil Nadu
Title: Analysis of weight loss and type 2 Diabetes Mellitus after Bariatric surgery - A Meta analysis.
- Dr. Shiji P V:** Asstt. Prof. Dept. of Medicine, Govt. Medical College, Calicut, Kerala,
Title: Vitamin D levels in Rheumatoid Arthritis patients and its correlation with severity.

The recipients were handed over a cheque of Rs. 8000.00 each from JIMSA funds of the Academy.

JIMSA Travel Grant for travel within the country is awarded to maximum 2 young researchers (age < 45 years) for presentation at IMSACON every alternate year. The above guidelines are in adherence to and in conformity with the decision taken in the meeting of Central Executive Committee approved by the of Board of Trustees of International Medical Sciences Academy, World Headquarters, New Delhi, held on January 26, 2010.

Editor