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High-Speed Driving Trends of Medical Students, Majmaah University, Saudi Arabia

Hussam Zain[1*], Sami Alanazi[2], Mohmmed Althumairy[2], Abdulrahman Aldhawi[2], Madania Mohammed Nore Idrees Ejiel[3], Elabbas M Ebaid[4]

[1]Department of Obstetrics and Gynaecology, College Medicine, Majmaah University, Majmaah 11952, Saudi Arabia

[2]Medical Intern, College of Medicine, Majmaah University, Majmaah11952, Saudi Arabia

[3]Department of otorhinolaryngology (ENT), College of Medicine-Al Majmaah University, Saudi Arabia

[4]department of Radiology, College of Medicine, Majmaah University, Majmaah11952, Saudi Arabia

ABSTRACT

Background: *Speed driving means exceeding the allowed speed limit, a major problem worldwide, which can increase morbidity and mortality rate. Exceeding the speed limit have been associated with increase prevalence of road traffic accident.*

Objective: *The objectives were to study the trends of high-speed driving among students at medical college in Majmaah University, Saudi Arabia and to determine its reasons*

Methods: *This study was cross-sectional (prevalence study), to study the rate of high-speed driving among students at medical college, Majmaah University, Saudi Arabia. A pre-tested questionnaire was administered to the sample and Statistical Package for Social Science (SPSS) was used for data analysis.*

Results: *This study showed high prevalence of exceeding the speed limit while driving among the students at medical college, 89% of the students admitted that they tend to race beyond the speed limits.*

Conclusion: *The rate of high-speed driving among medical students of Majmaah University is high. There is a significant association between high-speed driving and the attitude of chatting with someone while driving. Being in a hurry is a major reason behind fast driving.*

Key words: Majmaah University, High speed driving, Medical students

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Corresponding author: Hussam Zain
e-mail ✉ : Zain98@ Hotmail.com
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INTRODUCTION

High speed driving is generally exceeding the allowed speed limits, which affect the driver's ability to handle the curves and other obstacles in the roads. It is the second contributing factor of traffic deaths after drunk driving. A major problem worldwide, which can increase morbidity and mortality. It is responsible for almost 30% of overall deaths on road accident in the developed and rich countries and is generally considered as the main leading cause of overall road accident in developing countries and countries with poor to intermediate level of economy. Factors that can lead people to exceed the speed limits are many, including irresponsibility, saving time and lack of awareness [1]. Crush accidents are mainly the cause of death in adolescents and young adult worldwide and most of them are males 80. In Saudi Arabia, cars are the main mode of transportation with one person killed and four injured every hour. Over 65% of accidents are because of cars exceeding the speed limit and/or drivers not following driving roles [2]. The more the driver is faster, the more he is unable to stop or control the car, and the more he suffers from serious damage. For instance, if the driver speed is 50 km/h, the car requires 13 meters to stop, and if it is less than 40 km/h, it will take 8.5 meters or less [1]. The pedestrians if they prone to car accident, they have 90% survival chance if the car's speed is 30 km/h or below, and 50% survival chance if the car's speed is 45 km/h or above [3,4]. Another study, which was carried out in eastern of KSA, it revealed high relationship between high-speed driving and car accidents, accounting for about 20.60% of accidents' causes [5]. Severity of car accidents is one to consider which is associated primarily to exceeding the driving fast, not using the seat belt and using cellphones while driving [6]. Risk factors for fast driving are many, and we can categorize them into: First,

human factor, such as age, those younger than 24 years old 29% of them are driving fast. It is more common in male than female. In addition, attitude related behavior such as being in bad mood, they think their trips more important than others, lack of patience and being selfish, thinking of having a better car and others should not pass them. Alcohol level is strongly related to fast driving, ownership of the vehicle is also a contributing factor. Secondly, traffic and environmental factors, including low density in the road, which provides a chance to get faster, the design of infrastructure can facilitate fast driving. Environmental factors include the condition of the weather, street status, road lighting and traffic signs. Thirdly, road and vehicle factors. Road factors include width and length of the road, alignment, surrounding, and surface factor. Vehicle factors, like the type of the car, power and weight ratio, maximum speed and acceleration and the comfort of the vehicle [1,7]. Regarding the causes, they include "being late", so they drive fast because they were in a hurry, and "for fun and take the others' attention and being as "habitual". HSD can result in bad consequences, 27% of young drivers and passenger's deaths occurred in fast-related crashes [7]. To prevent this issue and minimizing its negative impact, the World Health Organization suggested some solutions including, enforcement of the rules against high-speed driving.

MATERIALS AND METHODS

This was a cross-sectional study conducted in college of medicine in Majmaah University, Saudi Arabia to study the prevalence of high-speed driving among students. Majmaah is a small city in the central region of Saudi Arabia. One hundred and forty-six students were taken by simple random sampling. Table of random selection was used for selection of the sample. Data were collected by predesigned and self-administered questionnaires. Data analysis was performed by SPSS version 22. Descriptive statistics have been used (frequency and standard deviation). Ethics approval was obtained from Majmaah University Ethics Committee. Informed consent was obtained from the students. All data kept confidential and used only for the purpose of this study.

RESULTS

The results revealed that 130 students (89%) admitted that they tend to race beyond the speed limits compared with only 16 (11%) students said they don't (Figure 1). Ninety-seven students (66.4%) own their cars, 49 students (33.6%) don't own their cars. When fast drivers were asked how much they exceed the upper limit. 62 (42.5%) they used to exceed the speed limits by 11 -20 km /h, 43 (29.5%) by 5 -10 km /h, 23 (15.8%) by 21- 30 km /h, and 18 (12.5%) by more than 30 km /h. One-hundred students (68.5%) mentioned they drive fast because they were in a hurry, 28 (29.2%) because the type of the car has a role in driving fast, 21 (14.4%) for the thrill they feel, and 12 (8.2%) for the fun of it. Concerning where they drive fast, 93 (63.7%) stated driving fast on the highway, 14 (9.6%) inside the city, and 39 (26.7%) on both areas. Regarding attitude during driving, 89 (61.0%) of the students mentioned that they use the seat belt while driving, 62 (42.5%) use mobile phone while driving, 24 (16.4%) smoke while driving, and 65 (44.5%) chatting with someone accompanying them (Table 1). Regarding the consequences they may face secondary to fast driving, 33 (22.6%) had accidents due to high-speed driving, and 47 (32.2%) had lost the control of vehicle while driving fast (Figure 2). Correlation analysis showed significance relation between fast-driving and chatting with the passenger (p= 0.033). However, fast driving has no significant relation with use of the seat belt, use of mobile phone or smoking (Table 2). A significant relation was also observed between the prevalence of fast-driving and being in hurry (p=0.042). The relation of fast driving with other causes of acceleration tested on this study, namely the type of the car, driving for the thrill of it and having fun, were not significant (Table 3).

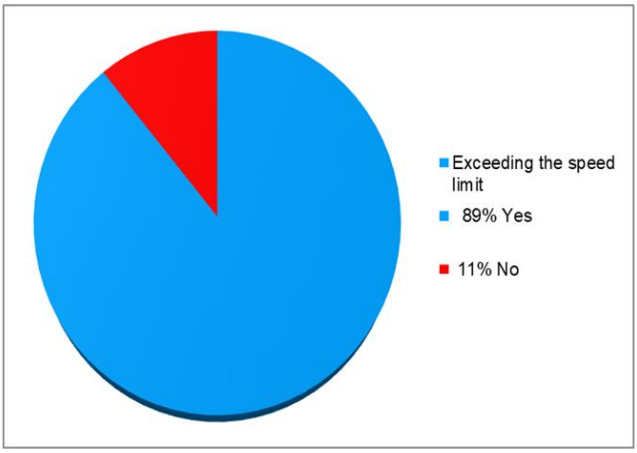

Figure 1: Rate of high-speed driving of medical students (n=146).

Table 1: Main reasons, attitude, level of speed and where to drive fast.

Level of exceeding the speed limit while driving fast	5-10 Km/h (29.5%)	11-20 Km/h (42.5%)	21-30 Km/h (15.8%)	More than 30 km/h (12.3%)
Main reasons of high-speed driving	In a hurry (68.5%)	For fun (8.2%)	Type of the car (29.2%)	Take the thrill (14.4%)
Attitude of the students while driving	Chat with someone (44.5%)	Smoke (16.4%)	Use their phone (42.5%)	Use the seat belt (61%)
Where to drive fast	On the highway (64%)	Inside the city (9%)		In both (27%)

Table 2: Relation between rate of speed driving and the attitude while driving.

Attitude	Rate of high-speed driving			
	Yes No. (%)	No No (%)	Total	P value
Not use the seat belt	57 (39%)	89 (61%)	146	0.594
Use the mobile phone	62(42.5%)	84(57.5%)	146	0.426
Smoke	24(16.4%	122(83.6%)	146	0.744
Chat with someone	65(44.5%)	81(55.5%)	146	0.033

Table 3: Relation between high-speed driving and its reasons.

Reasons	High speed driving			
	Yes No. (%)	No No (%)	Total	P value
In hurry	100 (68.5%)	46(31.5%)	146	0.042
Type of the car	28 (29.2%)	118(70.8%)	146	0.633
Thrill of driving fast	21 (14.4%)	125(85.6%)	146	0.587
Taking the risk because it is fun	12 (8.2%)	134(91.8%)	146	0.128

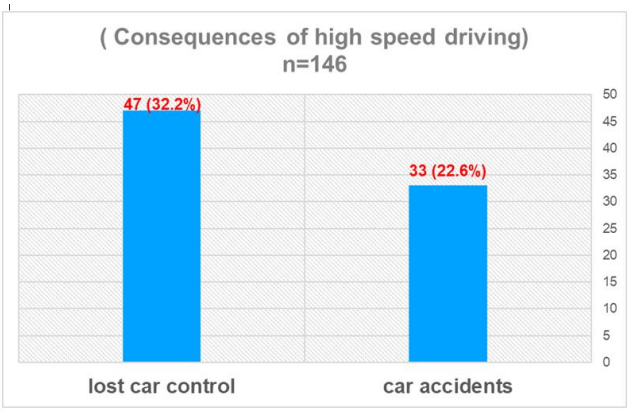

Figure 2: Consequences of high-speed driving (n=16).

DISCUSSION

This research was conducted to study the prevalence of high-speed driving among the medical students in Majmaah University, Saudi Arabia. In general, our result shows that more than 3\4 of the students (81%) admitted they tend to speed beyond the speed limits.

The reasons behind speedy driving, according to our survey are, because of the hurry, 100 students (68.5%), and 12 (8.2%) because of fun. Based on our results, the relation between high-speed driving and being in a hurry was significant (p=0.042).

According to our findings, most of the students drive fast mainly on the highways (63.7%), this is consistent with the study conducted in different countries of Europe in which 49% average percentage of exceeding speed limits were on the highways [8].

Regarding the relation between speedy driving and the consequences, no significant association between HSD and accidents, no relation between HSD and loss of control over a vehicle while driving fast was observed. These results contradicted study in Eastern of Saudi Arabia which indicated strong relationship between accidents and exceeding the speed limits of about 20.60% [5].

About the attitude while driving, the study showed that 89 students (61.0%) use the seat belt, 62 (42.5%) use mobile phone while driving, no significant association was observed between using the seat belt, mobile phone, and smoking with high-speed driving. However, significant relation was observed between chatting with any passenger and prevalence of high-speed driving (p=0.033). These findings Differs with a study conducted amongst college students in Kerman, Iran, which mentioned that 14.0% of male and 19.0% of female students use seatbelt when driving on roads, and 19.0% of male and 4.2% of female students use mobile phone while driving [9].

Another study conducted in University of North Carolina at Chapel Hill revealed that 6.7% of the drivers used electronic devices while driving, and most of the drivers were distracted when there was other passenger present with them [10]. Regarding the relationship between HSD and accidents, our result revealed that 33 (22.6%) had accident due to high-speed driving, no significant association was noticed between these two parameters. A study in KSA showed a completely different value, in that study more than 65% of the accidents were due to exceeding the speed limits,

but the reasons behind these discrepancies are not clear for us [11].

CONCLUSION

Our study concluded that the rate of high-speed driving among medical students of Majmaah University is high. There is a significant association between high-speed driving and the attitude of chatting with someone while driving. Being in a hurry is a major reason behind fast driving. Most of the students exceed the speed limits by 5 -10 km /h.

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