

Awareness of causes of road traffic accident and safety measures among drivers in Sokoto, North Western Nigeria

¹Ismail S., ¹Bature M.

¹Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto

Corresponding author:

Ismail S., Department of Surgery, Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto. Email:

salisuismail@yahoo.com

Abstract

Introduction

Significant numbers of people are dying and several are being injured on a daily basis as a result of road traffic accident. This is seen more in low socioeconomic communities and should be regarded as public health problem. This study aimed to determine the awareness of causes of road traffic accidents as well as safety measures among drivers in Sokoto State.

Methodology

This is a cross-sectional descriptive study; conducted in June 2010 in Sokoto metropolis. Self-administered semi-structured questionnaire was used to interview the commercial, public and private drivers to determine their knowledge on the causes and preventive measures of road traffic accident.

Results

A total of 123 drivers were interviewed, 83(67.5%) of whom were public/private and 40(32.5%) commercial drivers. The gender distribution depicts 102(82.9%) male participants giving a male to female ratio of 4.9:1. There was no commercial female driver in this study. Fourteen (11.4%) of these drivers started driving below the age of 18years. The majority 75 (61.0%) of participants possess tertiary education while 30 (24.4%) had no formal education. Ninety nine (80.5%) drivers have driving license, among whom 66 (66.7%) were reported to have been tested before issuance of the license.

Regarding the location of driving, 44(35.8%) drive locally, 20(16.3%) mostly on highway and the remaining 59 (48.0%) are both local and highway drivers. Only 31(25.2%) of the drivers interviewed were aware that there is a sign on the road that indicate prohibition of overtaking.

About the use of seat belt, 40(43%) of Private/public drivers and 7(23%) of commercial drivers use seat belt always, while 21 (23%) and 3 (11%) respectively use seat belt only some times. Significant number of the drivers 90 (73.17%) interviewed believed that high rate of vehicular accidents are seen on bad roads, others said it is more frequent on good roads. Nevertheless, 18 (14.6%) of all the drivers interviewed knew that vehicle tyre has an estimated life span or expiry date.

Conclusion

Knowledge of road signs and road traffic rules and guidelines among the drivers interviewed is inadequate. These drivers knowledge of causes of road traffic accident and means of prevention is fair. We recommend continuous awareness campaigns and enforcement of road traffic regulations in order to minimize the burden of road traffic crashes.

Keywords: road traffic accident, awareness, safety measures, drivers.

Introduction

On a daily basis, thousands of people are injured or died, mostly young, following road traffic accidents.¹ This problem is more marked in low income communities, mostly developing countries. Road traffic injuries are major but

neglected global public health problems. It requires concerted efforts for effective and

sustainable prevention. Worldwide, the number of people killed in road traffic crashes each year is estimated at 1.2 million, while the injured could be as high as 50 million.²

WHO reported that road traffic injuries constitute a major public health and development crisis, and are predicted to increase if road safety is not addressed adequately by her member states.² According to WHO data, deaths from road traffic injuries account for nearly 25% of all deaths from injury.¹ By the year 2020, road traffic accident is predicted to be the 3rd among the 10 leading causes of the global burden of disease. In economic terms, the cost of road crash injuries is estimated at approximately 1% of gross national product (GNP) in low-income countries, 1.5% in middle-income countries and 2% in high-income countries.¹

Road traffic accidents rank prominently among the three leading causes of death in the developing world today, but perhaps because it is not seen as disease; it is not being combated as is the case with other diseases such as acquired immunodeficiency syndrome or malaria.³ This study was to assess the awareness of drivers on the causes of road traffic accidents and preventive measures in Sokoto State, North Western Nigeria.

Methodology

This is a cross-sectional descriptive study carried out to determine the awareness of private, public and commercial drivers about the causes and prevention of road traffic accidents. The study was conducted within Sokoto metropolist comprising of Sokoto North, South and Central as well as Wamako Local governments areas in June, 2010. Study populations were public, private and commercial drivers; participants were drawn by simple

random sampling. Minimum sample size was estimated at 120 participants' determined using pilot survey before commencement of the study. Data was obtained using self-administered semi-structured questionnaire. Analysis was done using Microsoft spreadsheet 2010 version and results were presented using raw figures, ratio, percentages, tables and charts. All drivers who are above 18 years and willing to participate were included in the study and those below eighteen years or not willing were excluded from the study. Consent of each participant was sought before give the questionnaire. Permission of National Union of Road Transport Workers was obtained before distribution of questionnaires in the commercial motor parks in Sokoto.

Results

A total of 123 drivers were interviewed, 83(67.5%) were public/private and 40(32.5%) commercial drivers. The gender distribution were 102(82.9%) males and 21(17.1%) females; making male to female ratio of 4.9:1. No commercial female driver was found in this study; 14(11.4%) of these drivers started driving below the age of 18years. Education level of the drivers include primary school only 8(6.6%), Secondary school only 10(8.1%), tertiary 75(61.0%), and no formal education 30(24.3%). Ninety nine (80.5%) drivers have driving license, among whom 66(66.7%) were tested before obtaining the license. The remaining drivers who do not acquire driving license have various reasons for that, which include lack of

fund in 29.2%, and lengthy procedure before obtaining the license in 33.3%.

Regarding the location of driving, 44(35.8%) drive locally, 20(16.3%) mostly in highway and the remaining 59 (47.9%) are both local and highway drivers. Only 31(25.2%) of the drivers interviewed were aware that there is a sign on the road that indicate prohibition of overtaking.

About the use of seat belt, 40 (43.0%) of Private/public drivers and 7(23.0%) of commercial drivers use seat belt always, while 21 (23.0%) and 3 (11.0%) respectively use seat belt only sometimes; the remaining do not use seat belt at all. Significant number of the drivers 90 (73.2%) interviewed believed that high rate of vehicular accidents are seen on bad roads, others said it is more frequent on good roads. However, of all the drivers interviewed, only 18(14.6%) knew that vehicle tyre has an estimated life span or expiry date.

The perception of these drivers about the major causes of road traffic accidents are reckless driving/dangerous overtaking, over-speeding, bad roads and overload while their opinion about the means of prevention include enforcement of road traffic regulations, good roads/maintenance as well as careful driving.

Table 1: Showing gender of the drivers and age at commencement of driving

Category of drivers	Age of commencement of driving (years)		Gender of participants	
	< 18	≥/ >18	Male	Female
Public and private	10	83	72	21
Commercial	4	26	30	0
Total	14 (11.4%)	109 (88.6%)	102 (82.9%)	21 (17.1%)

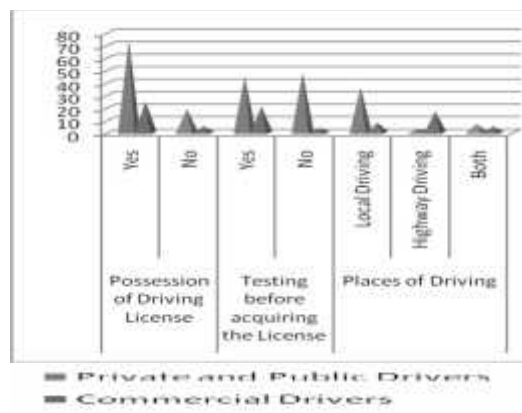


Figure 1: A bar chart highlighting possession of driving license and places where respondents drive

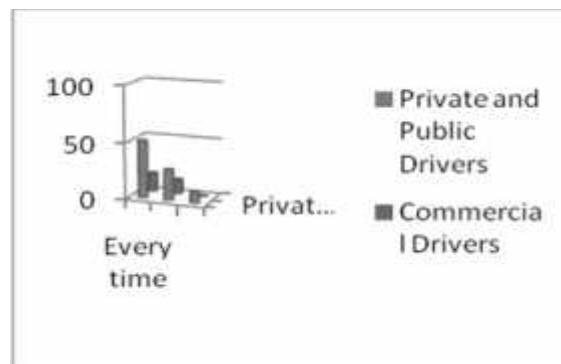


Figure 2: Bar chart highlighting the use of seatbelt by the respondents

Table 2: Showing awareness of the participants about tyre lifespan and signs on the road that prohibit overtaking

Category of the drivers	Knowledge of tyre lifespan			Knowledge of signs on the road that prohibit overtaking		
	Yes	No	Don't know	Yes	No	Don't know
Private and public	7	41	45	69	11	13
Commercial	1	29	0	23	5	2
Total	8 (6.5%)	70 (56.9%)	45 (36.6%)	92 (74.8%)	16 (13.0%)	15 (12.2%)

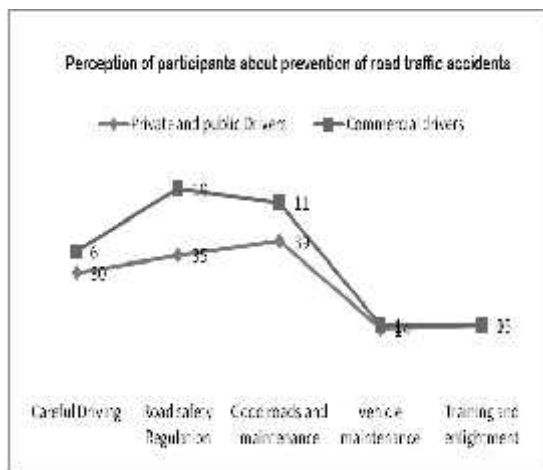


Figure 3: perception of participants about prevention of road traffic accidents

Discussion

Road is a path established over land for the passage of vehicles, people and animals. It provides dependable pathway for moving people and goods from one place to another. Roads are typically smooth, paved, or otherwise prepared to allow easy travel.⁴ When used properly and road traffic regulations followed; road traffic accidents will be reduced to a minimum. Roads are used by different category of users ranging from motorists, pedestrians, cyclists, children, animals, hawkers and traders. There are specific rules and regulations governing each road user.⁴ The causes of road traffic accident varied, but are categorized as human, mechanical and environmental factors. Human factors constitute about 90% of the causes of road traffic crashes.⁴ Human factors could be from the driver or passengers' side. The driver factors include overconfidence while driving, over speeding, lack of concentration, tiredness, driving under the influence of alcohol or drugs, poor vehicle care/maintenance, indiscriminate packing and

dangerous overtaking. Passengers could contribute to road traffic accidents either by causing distraction to the driver or by their nonchalant attitude in observing the safety of the vehicle before boarding it.⁴

Knowledge of road and road traffic rules is necessary for safety driving and prevention of road traffic accidents. For a driver to commence driving in Nigeria, he must attain acceptable age (18years), and must possess a driving license. Before awarding a driving license, a driver must pass through series of training about road signs, rules and regulations governing the use of road and finally be tested. About 15% of the drivers interviewed do not have driving license, and about 11% of them started driving before the recommended age. Furthermore, 33% of those drivers who possessed driving license were not tested before they were issued license.

Seat belt is one of the safety measures in road traffic rules. In our study, public/private drivers have better compliance with regard to use of seat belt more than commercial drivers (43% and 23% respectively). This coincides with the 52% reported by *Iribhogbe & Osime*.⁵ According to *Zhang et al*, 65% of the drivers in a China study⁶ were found to use seat belt while driving.

Generally, the participants have poor knowledge about road signs especially, the sign that indicates prohibition of overtaking. Likewise, their knowledge about vehicle safety with regard to lifespan of a tyre is also poor. On the other hand, the drivers have fair knowledge of the major causes of road traffic accident and means of its prevention. The numbers of participants

are limited by their willingness and there were a good number of participants who do not completely respond to the questions.

Conclusion

This study showed that most drivers have poor knowledge of road signs, and do not comply with some rules governing road usage. Reckless driving, dangerous overtaking, over speeding, bad roads and overload are pointed as the major causes of road traffic accidents. We therefore recommend that government and policy makers should enforce the traffic rules and regulations, roads should be constructed and maintained when and where necessary. In addition, Federal Road Safety Commission should embark on continuous awareness campaigns and drivers advised to generally adopt the spirit of safe driving.

References:

1. Razak JA, Luby SP. Estimating deaths and injuries due to road traffic accidents in Karachi, Pakistan, through the capture-recapture method. *International Journal of Epidemiology* 1998;27:866-570.
2. Peden M, Scurfield R, Sleet D, Mohan D, Hyder AA, Jarawan E, Mathers C. World report on road traffic injury prevention, 2004.
3. Olarenwaju LO. Reducing road accidents, 2001.
4. Nigerian High way code, second edition, November 2008.
5. Iribhogbe PE, Osime CO. Compliance with seat belt use in Benin City, Nigeria. *Prehosp Disaster Med.* 2008 Jan-Feb; 23(1):16-9.
6. Zhang W, Huang YH, Roetting M, Wang Y, Wei H. Driver's views and behaviours about safety in China: what do they NOT know about driving? *Accid Anal Prev.*2006 Jan; 38(1):22-7.

Conflict of interest: Nil

Acknowledgement: We acknowledged the support giving to us by the leadership of the National Union of Road transport workers of Sokoto State.