Demographics and Health Profiles of Inter-City Commercial Drivers in Kwara State, Nigeria

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Abstract

Motorized road transport among others has changed the face of employment, trade, family life and health care, bringing benefits that were unimaginable 100 years ago. However, the price being paid as a result of road traffic crashes (RTC) compared with the benefits is too high. The objective of the study was to determine demographics and health profiles of Inter-City Commercial Drivers in Kwara State, Nigeria.

The study design was descriptive cross-sectional, in which multi-stage sampling method was adopted to select 410 inter-city commercial vehicle drivers in Kwara State. Data was collected using pre- tested interviewer administered questionnaire. Data analysis was done using EPI INFO version 3.5.1 An appropriate test of significance (Chi-square, t test) were used to test statistics and the level of significance was predetermined at less than 0.05 at 95% confidence level.

The mean age of the respondents was 46.78 ± 11.27 years. Men constituted 99.8% of the respondents. Less than two-thirds of the respondents, 249 (60.7%) had ever done a medical checkup. About a third of the respondents 146 (35.6%) had raised blood pressure and 178 (43.4%) reported medical history of hypertension. Eleven percent had poor vision among the respondents.

Law enforcement agencies, trade unions, road transporter associations and licensing authorities should ensure basic medical test and assessment are done at regular interval and before issuance of driving license. This will not only detect unnoticed disease or medical conditions but will provide opportunity for only those who are fit to be certified commercial drivers.

Key words: Demographic, Health, Profile, Commercial, Driver, Nigeria

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Introduction

Movement of passengers and goods from one place to another is made easy with different means of transportation viz: land (road, rail), air and water. Motorized road transport among others has changed the face of employment, trade, family life and health care, bringing benefits that were unimaginable 100 years ago.[1] With this development, patients can be transported to emergency rooms, deliver relief materials at the sites of disasters and take holidays in places people would not have been able to visit before.[2] However, the price being paid as a result of road traffic injury for such benefits is too high. Road Traffic Crashes (RTC) occur when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or utility pole or when the vehicle loses control.[1,2] Worldwide, RTC lead to death and disability as well as high financial cost to the individual involved, family, community and society at large.[3,4]

Epidemiologically, road traffic crash is determined by the triad of the vehicle (agent), host (human), and environment such as road and visibility.[3] A lot of risk factors influence the occurrence of RTC and consequent injuries. The factors that are associated with host include lack of knowledge and information on safe driving, poor personal perception of risks of RTC, drink-driving, impairment like sight, hearing and other sensory receptors, lack of adequate institutional legal frame work and poor enforcement of legislation.[5] In a study conducted in Benin-City, Nigeria, 45.9% of inter-city drivers were between 31-40 years and 89.2% had secondary education.[6] About 18.0% were hypertensive and 7.7% had impaired vision and 49.0% of the drivers were categorized as unfit to drive.[6] Many road traffic crashes have been reported culminating in loss of lives and properties and the observed demographic and health conditions of drivers may have contributed significantly.

Road traffic injuries are a major but neglected public health challenge that requires concerted efforts for effective and sustainable prevention.[7] Of all the systems with which people have to deal every day, road traffic systems are the most complex and the most dangerous.[5] Health care workers are very aware of the burden to the health service and the community particularly in emergency care, rehabilitation and care following permanent injuries and the consequences of the loss of the bread winner or main career in a family. Road traffic injuries are responsible for the majority of

disability and occupational handicap from major traumatic injury.[5]

In Nigeria, a study conducted in Ilorin, Kwara State revealed that over three-quarters of the victims of road traffic crashes are young people.[8] Using epidemiological evidence from national studies, a conservative estimate can be obtained of the ratios between road deaths, injuries requiring hospital treatment, and minor injuries, as being 1:15:70 in most countries. In many low-income and middle-income countries, the burden of traffic-related injuries is such that they represent between 30% and 86% of all trauma admissions.[7]

The Federal Road Safety Corps (FRSC) in Nigeria has been making efforts to reduce the scourge of RTC by enforcing traffic regulations on the road users particularly the commercial vehicle drivers. However, some demographic and health factors responsible for RTC are not efficiently and effectively addressed by the concerned authorities. These factors include, under-age driving, drink-driving, poor visual acuity, uncontrolled hypertension, poor medical history, etc among the Nigeria commercial vehicle drivers.[4, 5] This study assessed the Demographics and Health Profiles of Inter-City Commercial Drivers in Kwara State, Nigeria.

Methods

The study was conducted in Kwara State. It is located at the geographical and cultural confluence of the North and South of Nigeria. Kwara State has a projected population of 3, 003,257 for 2016 based on 2006 national census and annual growth rate of 3.0%.[9] Commercial drivers provide a means of intra and interstate transportation for the greater number of people in Kwara State (63.7%)[10] as in most developing countries.

It was a descriptive cross-sectional study that assessed the demographic and health profiles of inter-city commercial drivers in Kwara State, Nigeria. Commercial drivers who were registered with their respective associations and drive passengers-conveying motor vehicles from one town or city to another were involved in the study.

Multistage sampling technique was employed using two stages. In stage one, a simple random sampling technique using the balloting method was adopted to select four major parks in each of the three Kwara Senatorial districts. In stage two, each of the parks selected, systematic sampling method was used to select desired number of respondents among commercial drivers based on proportional allocation. A total of 410 inter-city commercial drivers were involved in the study. Data were collected using pre-tested interviewer administered questionnaire. Data analysis was done using EPI INFO version 3.5.1 Chi-square and t test were used to test statistics and the level of significance was predetermined at less than 0.05 at 95% confidence level. Ethical approval for study was obtained from the Ethical Review Committee, University of Ilorin. Permission was sought from the different motor parks chairmen. Informed consent was obtained from respondents.

Results

Table one revealed that the mean age of the respondents was 46.78 ± 11.27 years. Men constituted 99.8% of the respondents. Majority 370 (90.3%) of respondents were Muslims. Yoruba ethnicity accounted for 387 (94.4%) while Hausa were 2.0%. On literacy status, 18 (4.4%) had tertiary, 103 (25.1%) secondary, 166 (40.5%) primary and 123 (30.0%) had no formal education. Majority (94.6%) of the respondents were married.

In table two, of the total respondents, 64 (15.6%) had less than ten years driving experience, 123 (30.0%) were in the business for 10-20 years and 107 (26.1%) had spent 21-30 years on the job. Although, majority 393 (95.9%) had drivers' license, only 289 (75.1%) of respondents had valid license. One hundred and fourteen (24.7%) did not undergo eye test before obtaining their licenses. The proportion of those who had driving test before issuance of license were 81.4% (320).

Table 1: Socio-demographic variables of respondents (N = 410)

Socio-demographic variables	Frequency	Percent (%)
Age group (years)		
= 25	16	3.9
26 – 35	62	15.1
36 – 45	131	32.0
46 – 55	109	26.6
56 – 65	74	18.0
> 65	18	4.4
Mean ± SD	46.78 ± 11.27	
Median (IQR)	45.00 (40.00 – 55.00)	
Range	22 – 73	
Sex		
Male	409	99.8
Female	1	0.2
Religion		
Islam	370	90.3
Christianity	39	9.5
Others	1	0.2
Ethnicity		
Yoruba	387	94.4
Hausa	8	2.0
Igbo	6	1.5
Others	9	2.1
Educational level		
None	123	30.0
Primary	166	40.5
Secondary	103	25.1
Tertiary	18	4.4
Marital status		
Single	13	3.2
Married	388	94.6
Widowed	9	2.2

SD: Standard deviation; IQR: Inter-quartile range

Table 2: Respondents' driving experience, licensing and medical screening (N= 410)

Variable	Frequency	Percent
Driving experience (years)		
= 10	64	15.6
11 – 20	123	30.0
21 – 30	107	26.1
31 – 40	91	22.2
> 40	25	6.1
Possession of driver's license Yes	393	95.9
Did eye test before given the license (n=393) Yes	296	75.3
Did driving test before issuance the license (n=393) Yes	320	81.4
Renewal of license as at when due (n=393) Yes	385	98.0
Valid Driver's License (n=385) Sighted	289	75.1
Ever carried out medical check up(N = 410)		
Yes	249	60.7
Frequency of medical checkup (n=249)		
Every 2 years	99	39.8
Every 3 years	18	7.2
Every 5 years	7	2.8
Not Regular	125	50.2
Time of last medical test (n=249)		
< 6 months	148	59.4
6 – 12 months	30	12.0
> 1 year	71	28.5
Components of test done (n=249)		
Only physical examination	125	50.2
Physical examination and eye test	119	47.8
Eye test only	5	2.0
Motivation for medical test/ screening (n=249)		
Personal	212	85.1
Medical advice	37	14.9

Table 3: Visual Acuity and Blood Pressure pattern of respondents (N = 410)

Visual acuity	Frequency	Percent
Right eye		
= 0.5*	53	12.9
0.67	47	11.5
0.83	18	4.4
1.00	292	71.2
Left eye		
= 0.5*	51	12.4
0.67	47	11.5
0.83	11	2.7
1.00	301	73.4
Visual status of respondents (N=410)		
< 0.50 poor/impaired vision	45	11.0
= 0.50 normal vision	365	89.0
Systolic Blood Pressure		
=140	146	35.6
< 140	264	64.4
Diastolic Blood Pressure		
= 90	135	32.9
< 90	275	67.1
Hypertensive		
Yes	178	43.4
No	232	56.6

IQR: Inter-quartile range; SD: Standard deviation;* = 0.5: poor vision

In table 2, less than two-thirds of the respondents, 249 (60.7%) had ever done a medical checkup. Of the respondents ever done medical checkup, 99 (39.8%) had it every 2 years, and 125 (50.2%) were not regular with the checkup, with 125 (50.2%) had only physical examination done. Majority respondents 212 (85.1%) had the medical test based on personal request, while few 37 (14.9%) of them had medical advice as motivation for the screening.

In table three, visual acuity assessment revealed that 53 (12.9) had poor vision on the right eye and 51 (12.4%) on the left. Of the total respondents, 365 (89.0%) had good vision while 45 (11.0%) had poor vision. Table three revealed that about a third of the respondents 146 (35.6%) had raised blood pressure and 178 (43.4%) reported medical history of hypertension.

Discussion

The mean age of the respondents in this study was 46.78 ± 11.27 years. This reflected that active population group is involved in commercial driving. Although the age range from 22 to 74 years, this showed the wide spectrum of individuals involved in transportation at early stage of life and continue till older age. Majority (90.3%) of respondents were Muslims and Yoruba ethnicity accounted for 94.4%. This is because there were more Muslims in the study sites (Kwara State) and it is predominantly Yoruba speaking area. On literacy level, a quarter (25.1%) of the respondents attended secondary school. Many of the respondents either had primary (40.5%) or no formal education (30.0%). Driving work does not require advance education; therefore, it is not surprise that three-quarters either had primary or no formal education. In fact, it is because of challenges of job opportunities in Nigeria that probably made the 4.4% of those with tertiary education to be engaged in driving work.

About one-third of the respondents (30.0%) were in driving business for 10 to 20 years and 26.1% had spent between 21 and 30 years on the job. These findings are consistent with age distribution of the respondents because most drivers start learning the art of driving between 15 and 20 years of age. This finding implied that major motor parks in the State are saturated with experienced and mature drivers where it is expected that compliance to safety rules and regulations will be given high priority. Although, 95.9% had drivers' license, only 75.1% of respondents had valid license. This is far from expectation as these are professional drivers whose only occupation is driving yet possession of license is sub-optimal. It clearly showed that there were gaps in monitoring and enforcement of laws if one in every four commercial drivers has no valid license.

Only 75.3% of the respondents underwent eye test before obtaining their licenses. Eye test is a pre-requisite for issuance of driving license. This observation implied that some of the commercial drivers on the road cannot be said to have a good sight to drive. This has serious implication for road traffic crashes. Similar to eye test, one (18.6%) in five drivers were given license without driving test. This is a guide on estimate of risk involved while on the road and implication for policy makers and regulatory bodies in the society. Visual acuity assessment revealed that 12.9% had poor vision on the right eye and 12.4% on the left. Of the total respondents, 11.0% had poor vision. Most of the respondents that had ever had a medical checkup carried out were on the grounds of personal request. There is a dearth of studies regarding regular medical checkup for drivers.[12, 13]

Hypertension has been associated with increased risk for acute life-threatening events, thereby resulting in higher crash risk.[14-16] About a third of the respondents 35.6% had raised blood pressure and 43.4% reported medical history of hypertension. Hypertension, diabetics, poor visual acuity, high body mass index, and other medical conditions pose potential risk for drivers and other individuals on the roads while the driver is on duty.[17] Also most of the respondents had never carried out eye test prior to this study. Even though the respondents did not perceived themselves at risk of poor vision, it is a strong risk factor for RTCs since there is a resultant difficulty in reading road signs which can lead to road crashes.

It was recommended that law enforcement agencies, trade unions, transporter associations and licensing authorities should ensure basic medical test and assessment are done before issuance of driving license. This will not only detect unnoticed disease or medical conditions but will provide opportunity for only those who are fit to be certified commercial drivers.

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