

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Drug Use, Driving Behaviour, Accident Rate and Passengers' Injury among Commercial Drivers in Oshodi Lagos, Nigeria

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Abstract:

Most drivers across the world, particularly long-distance drivers suffer from sleep deprivation, and physical and psychological stress in the line of their duties. To prevent these, a significant number of them use substances, even at the expense of their health, to remain awake and relieve fatigue in the course of their long-distance driving. At its most extreme, this act has been identified as precursor of auto-accident, passenger injury and risky driving behaviour. In Nigeria, however, the effects of drug use on the driving behaviour of commercial drivers, and the concomitant effects of such act on the physical and psychosocial health of passengers and other road users is yet to be given adequate research attention. To this end, this study examined how substance use of commercial drivers in Lagos metropolis influences their risky driving behaviour, rate of auto-accident, and passengers' injury. To achieve the above, 478 male commercial drivers were purposively selected (ages 20-68; \bar{x} =39.4; SD=10) in Oshodi, Lagos Metropolis. The participants responded to Substance Abuse Prevalence Inventory (SAPI), Driving Behaviour Questionnaire (DBQ) and Accident Rate Questionnaire (ARQ). The results revealed prevalence rates of drug use (36.4%), risky driving behaviour (47.7%), accident rate (13.4%) and passengers' injury 7.5% (minor injury 4.0%; major injury 3.5%). Results indicated that frequency, quantity and total drug use of drivers independently significantly predict their driving behaviour, accident rate and injury among the passengers.

Keywords: Drug use, driving behaviour, auto-accident, commercial drivers, Lagos

1. Introduction

For long time now, the issue of drug abuse and addiction and its myriad concomitant problems has unremittably resonated under academic and research spotlights in many parts of the world. Numerous authors and researchers have regularly assessed the costs (social, economic, and health) of illicit drug use on the lives of users, non-users and other members of the community (Schulte and Hser, 2014; Gans, 2019; NIDA, 2019). Despite the numerous dark sides of illicit drug consumption and various cross-cutting tasks employed nationally, regional and internationally; the problem of illicit drug use by people from different walk of life is not waning; and has consequently become a global phenomenon.

Indeed, the issue of drug use and abuse cuts across race, gender, creed, and occupational divides, and is steadily on the rise in recent years (Ekpenyong, 2012). It is estimated that about 230 million people (5%) out of the world's adult population have used an illicit drug at least once in the last 12 months of the survey (UNODC, 2012). In the same vein, several studies have shown that there is a strong correlation between driving under the influence of psychoactive drugs and auto accident. These studies and many others have underscored the fact that illicit drugs easily impair driving performance by reducing significantly people's driving ability (Stough and King, 2010; Alcohol and Drug Foundation, 2019; NIDA, 2019). Consequent upon this revelation, many countries in Europe and America have tightened their driving laws, increased penalties, and changed some of their strategies to address this growing problem (EMCDDA, 2007). Drug abuse among commercial drivers is major public health challenge. Involvement of commercial drivers in drug use and abuse can increase the risks of road crashes and other related automobile accidents. The impact of commercial drivers driving under the influence of psychoactive drugs can be substantial, damaging individual lives, properties, while shifting resources from other priorities, particularly within health practices.

With the increase in the rate of road traffic accidents and other related injuries in many states across Nigeria, commercial bus drivers have also been fingered in the use of illicit substances when discharging their duties. According to the World Health Organisation (2007), studies from low-middle income countries show that 4%-69% of injured drivers

had alcohol in their blood. The high incidence of road traffic accident observed in Nigeria and most societies in Sub-Saharan Africa are not unconnected with a high incidence of substance use among commercial bus drivers.

Commercial driving is a cumbersome and hazardous job characterized by sleep deprivation, physical workload and psychological stress. Often, the stage is set for auto-accident when these aforementioned factors are combined with the personality characteristics of many commercial drivers such as impulsivity, adventurousness, inability to tolerate authority, mental preoccupation, poor self-control, emotional release, competitiveness, risk-taking, assertive tendencies, being indifferent to right of others, driving for emotional release, and the tendency to dominate others (Issever, Onen, Sabuncu and Altunkaynak, 2002). To this end, studies by Davey and Richards (2005) reveals that a significant proportion of commercial drivers use stimulants to keep awake and relieve aggression and fatigue during their long work schedules.

Indeed, the consumption of psychoactive substances such as alcohol and marijuana negatively affect the mental state of drivers. Consequently, it causes altered perceptions and delayed reactions in them - a situation that increases the risk of involving in road accident (Drummer, 2005). In Nigeria, it is not uncommon to find illicit drugs being peddled and consumed in and around motor parks despite relevant national policies outlawing such acts (Akinawo, 2010; Lawal, 2010). Findings from studies conducted on drivers that were involved in motor accidents indicate that alcohol is the most prevalent source of driver's impairment, while other substances such as hemp, cocaine, and heroin also contribute to the problem too (Shibata and Fukuda, 1994). As a whole, driving under the influence of alcohol or other drugs impairs drivers' ability to judge and control their vehicles (CSA, 1983). Evidently, the association between psychoactive substance use and accidental injury or death has been acknowledged in the literature. In the UK for instance, alcohol accounts for 50,000 deaths per year and up to 500,000 hospital admissions annually (Humphis, 1991). In the United States of America, about 10,000 deaths were attributed to the use of alcohol by young people (New York Times, 2013). WHO also reported a link between drivers' hazardous use of alcohol and road traffic accidents in Nigeria (WHO, 2009). According to the Federal Road Safety Commission in 2008, an average of 14 people lose their lives on Nigerian roads daily and the nation records no fewer than 1,249,713 reported deaths by road accidents in over five decades. Alcohol is recognized as a leading contributor to road trauma. Alcohol as influencing factor for crashes has been clearly demonstrated by a number of studies which show substantial increases in crash risk when the blood alcohol concentration (BAC) exceeds 0.10 g per 100 ml (%) (Borkenstein, Crowther, Shumate, Zeil, and Zylman, 1974; Mounce and Pendleton, 1992; Robertson and Drummer, 1994).

In Australia, Drummer, Gerostamoulos, Chu, Batziris and Robertson (2003) reported a prevalence of 26.7% of psychoactive substance use among fatally injured drivers. The substances used included alcohol (18.6%), cannabis (13.5%), opiates (4.9%), stimulants (4.1%) and benzodiazepines (4.1%). They found that there was a high level of drug use among the participants. Similarly, Lasebikan and Baiyewu (2009) in a study conducted in Ibadan, Oyo State of South West Nigeria to assess problems associated with psychoactive substance use among long-distance commercial drivers, reported a prevalence of alcohol use as 77.5%, tobacco (60.5%), cannabis (52.5%) and inhalants (8.1%). The authors reported that road accidents were the most common problems among the participants, with a prevalence of 26.8%, and were commonest among those participants with alcohol use disorders. In a study by Welcome and Pereverzev (2010), approximately 50% of road accidents on Nigerian roads and its attendant consequences are attributed to alcohol use.

Many other studies in Nigeria have also reported the common use of alcohol (and other psychoactive substances) among commercial and long-distance vehicle drivers (Makanjuola, Daramola, and Obembe, 2007, UNAIDS 2007). Omolase, Afolabi, Omolase, and Ihemedu (2011) found a prevalence of 32% of alcohol drinking prior to driving among their study's respondents. Similarly, the Global Action on harmful drinking reported the prevalence of current drinking by commercial drivers in Nigeria (particularly drivers from Port Harcourt and Ile-Ife) as 67.2%. Of those drivers, 47% were 'heavy' users, 15.3% were 'moderate' users and 37.7% were occasional or 'mild' users. In addition, Gboyega (2012) found that between 60% and 70% of commercial drivers engage in drinking and driving. Closely related to the above, Makanjuola (2007) reported that the findings from the study showed that drivers he sampled in his study were using psychoactive substances in this order: alcohol (15.9%), tobacco (30.4%), cannabis (4.3%), caffeine (31.9%), sedatives (10.1%) and solvents (8.7%).

In fact, as the aforementioned narratives and findings from studies conducted in Nigeria have shown, driving under the influence of psychoactive drugs particularly among commercial drivers has continued unabated. To this, end, however, this study aims at exploring the predictive influence of drug use on driving behaviour, accident rate and passengers' injury among commercial drivers in Lagos metropolis.

The rationale for this study stemmed from the fact that the number of people killed in motor vehicle accident each year globally is estimated at almost 1.2 million, while the number injured could be as high as 50 million. To corroborate this, findings of many studies have shown that road traffic accidents are the leading cause of death and disability in many countries around the world. Low-income and middle-income countries which have only 48% of the world's vehicles are reported to account for about 90% of these casualties. However, while the casualty rate is decreasing significantly in the developed world as a result of ambitious accident countermeasures put in place, in developing countries like Nigeria, limited attention has been paid to this growing threat. Hence, while traffic crashes are predicted to further decrease by 27% in developed countries of world by 2020, they are estimated to increase by 83% in low income and middle-income countries (WHO, 2004). The economic and psychosocial consequences of these crashes for the rural and urban poor, the majority of whom make up the vulnerable road users such as pedestrians, cyclists, and occupants of passenger-carrying vehicles, are devastating. With the rapid increase in the number of the motor vehicles, risky driving behaviour and traffic accidents have aroused wide public concern, and risky driving has been identified as an important contributor to road crashes (Boyce and Geller, 2002). As highlighted above, the main purpose of this research is to investigate drug use as a predictor of driving behaviour, accident rate and passengers' injury among commercial drivers in Lagos Metropolis. To achieve this, questions pertaining to whether or not drug use independently significantly predict driving behaviour and

accident rate among commercial drivers in Lagos Metropolis; to what extent does the frequency of drug use independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos Metropolis; and to what extent does quantity of drug use independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos Metropolis were raised?

2. Methods

The cross-sectional survey research method using ex-post facto design was adopted. Oshodi, the commercial hub of Lagos Metropolis was purposively chosen for this study mainly because it is arguably the busiest transport hub in Nigeria. This transport centre has more than 13 different motor parks and more than 5,600 buses ferry over 200,000 passengers and loads to different parts of the country on daily basis (Vanguard, 2017). A total number of four hundred and seventy-eight commercial drivers were selected using purposive sampling technique.

For sample size determination for a population less than 10,000, Araoye (2003) formula was used. However, the desired sample size when the population is more than 10,000 (n) was initially calculated so as to obtain the final sample estimate (nf).

The formula population of more than 10,000 is given as:

$$n = \frac{(Z_{\alpha/2})^2 * P (1 - P)}{d^2}$$

Where,

n = sample size

p = proportion in the target population estimated to have a particular characteristic

z = standard normal deviate, usually set at 1.96, which corresponds to the 95% confidence level

d = degree of accuracy desired, usually set at 0.05, 0.03 or occasionally at 0.02.

For this study, the following criteria were used to determine the sample size:

Based on the pilot study conducted using 101 participants, there was 27.7% prevalence of accident rate among commercial drivers. Therefore p = 0.28

A confidence level of 95% was used

The degree of precision (Margin of error) was set at 5.0%

$$n = \frac{(1.96)^2 * 0.28 (1 - 0.28)}{(0.05)^2}$$

$$n = 309.8$$

For population < 10,000

$$Nf = \frac{n}{1 + \frac{n}{N}}$$

Where,

nf = the desired sample size when the population is less than 10,000

n = the desired sample size when the population is more than 10,000

N = the estimate of the population size

$$Nf = \frac{309.8}{1 + \frac{309.8}{5600}}$$

$$Nf = 293.6$$

$$Nf \approx 294$$

The study, however, sampled a total number of four hundred and seventy-eight (478) participants.

3. Research Instruments

The authors adopted a battery of three psychological research instruments for the study. The Driving Behaviour Questionnaire (DBQ) (Reason, Manstead, Stradling, Baxter, and Campbell, 1990) was used to measure driving behaviour. It is a twenty-item instrument used to measure the driving behaviour. The items are classified into three sub-scales namely: driving error (8 items), highway code violations (8 items) and aggressive violations (4 items). In the survey, participants were required to rate each item on a seven-point Likert scale ranging from 1 = 'Never' to 7 = 'Always' to show how often they violate each of the risky driving behaviours such as 'errors', 'highway code violations' and 'aggressive violations'. In a bid to score the instrument, all the twenty items were summed up. The higher the score of the participants on each subscale, the higher the frequency at which they commit the risky driving behaviour per subscale.

New validity and reliability coefficients of the instrument were derived for the current research through a pilot study, using a sample of 101 commercial drivers in Oshodi, Lagos Metropolis. A significant positive correlation (r = .283, p<0.05) was found between Driving Behaviour Questionnaire (DBQ) and the Driving Behaviour Survey (Abbas, Ahmadi and Hamid, 2015). This is an evidence of acceptable concurrent validity. The reliability of the instrument showed a Cronbach alpha of .884, a Spearman-Brown coefficient correlation of .745 and a Guttman Split-Half reliability coefficient of .547. The Substance Abuse Prevalence Inventory (SAPI) (Omoluabi, 1995) was used to collect data on the respondent drug use. SAPI has two subsets that comprised of Column A and Column B developed to measure the frequency and quantity of consumption/misuse of assorted psychoactive drugs within a period of thirty (30) days. The frequency column measures the number of times specific psychoactive substances have been consumed (eaten, drunk, sniffed, ingested or inhaled)

ranging from '0' and '10+' and the quantity column measures the approximate quantity of substances consumed (number of bottles sticks, wraps, syringes, grams, pills or cups) ranging from '1' to '5'. The higher the score in column A, the higher the frequency of substance use and the higher the scores on column B, the more the quantity consumed. The total scores on the test reveal a respondent's substance use. New validity and reliability coefficients of the instrument were derived for this research by a pilot study using, a sample of 101 commercial drivers in Oshodi, Lagos Metropolis. The Substance Abuse Prevalence Inventory (SAPI) with the Drug Use Disorders Identification Test (DUDIT) (Berman, Bergman, Palmstiema and Schlyter, 2004). A significant positive correlation was found between Substance Abuse Prevalence Inventory (SAPI) and the Drug Use Disorders Identification Test (DUDIT) (Berman, Bergman, Palmstiema and Schlyter, 2004) ($r = .574, p < 0.05$). The reliability of the instrument showed a Cronbach alpha of .798, a Spearman-Brown coefficient correlation of .980 and a Guttman split-half reliability coefficient of .660. Also, for the study, an Accident Rate Questionnaire (ARQ) was developed by the researchers to assess commercial drivers' accident and injury experiences. ARQ is a five-item instrument used to measure involvement in accident, frequency, and type of injury (if accident resulted in injury), injury to passenger(s) or other parties. The reliability of the instrument showed a Cronbach alpha of .887, a Spearman-Brown coefficient correlation of .965 and a Guttman Split-Half reliability coefficient of .905.

4. Ethical Consideration

This research focuses on humans as elements of investigation, hence, ethics of research for human subjects were observed. The researchers obtained a certificate from the Nigerian National Code of Health Research Ethics of Center of Bioethics and Research, Nigeria and the University of Miami, Florida online course for reviewing regulatory and informational documents on the rights and welfare of human subjects participating in research from. Additionally, the research purpose and methodology were subjected to scrutiny by the Internal Research Ethics Committee of Redeemer's University, Ede, Osun State, Nigeria. Approval to administer research instruments on the selected commercial drivers in Oshodi, Lagos Metropolis was also obtained from the Road Transport Employers Association of Nigeria, Oshodi-Isolo Local Government Area, Lagos State. Participants were also duly informed about the research purpose and no coercion was used. All participants were assured of anonymity.

5. Results

Variables	Level	Frequency	Percentage(%)
Age	20-68 Mean= 39.4	478	100
Education	O-Level Diploma OND HND BSc Total	410 29 16 21 2 478	85.8 6.1 3.3 4.4 4 100
Marital status	Married Single Divorce Remarried Total	241 149 23 65 478	50.4 31.2 4.8 13.6 100
Family type	Monogamous Polygamous Total	407 71 478	85.1 14.9 100
Family size	1-5 6-10 11-15 Total	404 73 1 478	84.5 15.3 2 100
Religion	Christian Muslim Total	428 50 478	89.5 10.5 100
Tribe	Igbo Yoruba Hausa Total	43 428 7 478	9.0 89.5 1.5 100
Spouse Occupation	Informal Formal Others Total	325 23 130 478	68.0 4.8 27.2 100
Job Tenure	1-10 11-20 21-30 Total	322 127 29 478	67.4 26.6 6.1 100

Table 1: Socio-Demographic Characteristics of Participants

The summary of Table 1 reveals that the commercial drivers selected for this study aged between ages 26-68. Their mean age is 39.4 years. In relation to their educational qualification, 410 (85.8%) of the participants had secondary school leaving certificates, 29 (6.1%) of them had diploma certificates, 16 (3.3%) had National Diploma, 21 (4.4%) possessed Higher National Diploma and 2 (4%) had bagged B.Sc. degree. This shows that the majority of the commercial drivers in Lagos Metropolis are educated. The analysis of the marital status of participants shows that 241 (50.4%) were married, 149 (31.2%) were singles 23 (4.8%) were divorced, 65 (13.6%) had remarried. Summary of the family type show that 407 (85.1%) were from monogamous families while 71 (14.9%) were from polygamous families. Family size summaries shows that 404 (84.5%) had a family size of 1-5 members, 73 (15.3%) had a family size of 6 – 10 members while 1 (2%) had a family size of 11 – 15 members. Summaries of religious affiliation showed that 428 (89.5%) were Christians while 50 (10.5%) were Muslims.

Summary of the tribe show that 43 (9.0%) were Igbo, 428 (89.5%) were Yoruba, and 7 (1.5%) were Hausa. Spouse occupation summaries revealed that 325 (68.0%) were into informal occupations, 23 (4.8%) were into formal occupations and 130 (27.2%) were others. Tenure of the job shows that 322 (67.4%) had spent between 1-10 years on the job, 127 (26.6%) have been driving for between 11 and 20 years, while 29 (6.1%) had 21 -30 years driving experience.

Drug use	Abstinence (%)	Prevalence (%)	Moderate (%)	Severe (Pathological level) (%)
Frequency	62.3	37.7	20.8	16.9
Quantity	62.3	37.7	16.9	20.8
Drug use total	61.5	38.5	19.5	19.0

Table 2: Pattern of Drug Use

Pattern of drug use reveals a frequency of drug use prevalence of 37.7%, out of which 20.8% were at the moderate level and 16.9% at the severe/pathological level requiring clinical intervention. Prevalence of quantity of drug use among commercial drivers in Lagos metropolis is 37.7%, out of which 16.9% were at the moderate level and 20.8% at the severe level requiring clinical intervention. Finally, the prevalence of drug use among commercial drivers in Lagos metropolis is 38.5%, out of which 19.5% are at the moderate level and 19.0% at the severe level requiring clinical interventions.

Driving Behaviour	Normal Driving Behaviour (%)	Risky Driving Behaviour (%)	Moderate Level of Risky Driving Behaviour (%)	High level of Risky Driving Behaviour (%)
Error	41.2	58.8	22.2	36.6
Highway code	50.2	49.8	29.5	20.3
Aggression	47.3	52.7	33.5	19.2
Total Risky Driving Behaviour	41.2	58.8	27.4	31.4

Table 3: Prevalence of Risky Driving

Table 3 shows that 58.8% of commercial drivers report being engaging in error driving of which 36.6% engage in a high level of error driving. 49.8% of commercial drivers engage in highway-code violation of which 20.3% engage in a high level of Highway Code violation. 52.7% of commercial drivers engage in an aggressive violation of which 19.2% engage in a high level of aggressive violation. In total, 58.8% of the commercial drivers engage in risky driving behaviour of which 31.4% engage in a high level.

Accident Rate	Involvement in Accident (%)
Single accident	8.8
Multiple accident	4.6
Total	13.4

Table 4: Rate of Involvement in Accident and Injury

The table 4 show that 8.8% of commercial drivers report being involved in single accidents, while 4.6% reported being involved in multiple accidents. In total, 13.4% of commercial drivers have been involved in accident.

Injury	Percentage
Driver	8.4
Passenger	7.5
Other parties	6.3

Table 5: Driver's Injury / Passengers and other Parties' Injury

The table 5 shows the percentage of victim's injuries on Lagos metropolis. Drivers report 8.4% of being the victims of injuries, passengers' injuries are 7.5% while other parties sustain injuries 6.3% of the time.

	Drivers' Injury (%)	Passenger's Injury (%)
Minor	5.9	4
Major	2.5	3.5

Table 6: Type of Injury

Table 6 shows the prevalence of the type of injuries sustained by drivers and passengers. It indicates that drivers sustain 5.9% of minor injuries and 2.5% major injuries. On the other hand, passengers sustain 4.0% minor injuries and 3.5% major injuries in Lagos metropolis.

6. Test of Hypotheses

6.1. Hypothesis One

Drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	43911.30	1	43911.30	115.80	.000 ^a
Residual	180505.73	476	379.21		
Total	224417.03	477			
Predictor	B	SE.B	B	T	P
(Constant)	51.87	1.20		43.21	.000
Drug use	.627	.06	.44	10.76	.000

Table 7: Simple Linear Regression Analysis of Driving Behaviour by Drug Use
 $[F(1, 477) = 115.80, p < 0.05, R = .422, R^2 = .196]$

A simple linear regression was conducted to determine whether drug use independently and significantly predict the driving behaviour of commercial drivers in Lagos metropolis. Results indicated that drug use independently and significantly predicted driving behaviour among the sample, $[F(1, 477) = 115.80, p < .01]$. The analysis in table 4.9 above suggests that 19.6% variation in driving behaviour is explained by drug use among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	24.86	1	24.86	7.87	.005 ^a
Residual	1504.08	476	3.16		
Total	1528.93	477			
Predictor	B	SE.B	B	T	P
(Constant)	.43	.11		3.90	.000
Drug total	.02	.01	.13	2.80	.005

Table 8: Simple Linear Regression Analysis of Accident Rate by Drug Use
 $[F(1, 477) = 7.87, P < 0.05, R = .128, R^2 = .016]$

A simple linear regression was conducted to determine whether drug use independently and significantly predict accident rate scores of commercial drivers in Lagos metropolis. Results indicated that drug use independently and significantly predicted accident rate among the sample, $[F(1, 477) = 7.87, p < .01]$. The analysis in table 4.8 above suggests that 1.6% variation in accident rate is explained by the drug use among commercial drivers in Lagos metropolis. Based on this result the hypothesis is accepted. It is concluded that drug use is a statistically significant predictor of driving behaviour and accident rate among commercial drivers in Lagos metropolis.

6.2. Hypothesis Two

Frequency of drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	38107.09	1	38107.09	97.36	.000 ^a
Residual	186309.94	476	391.41		
Total	224417.03	477			
Predictor	B	SE.B	B	T	P
(Constant)	52.34	1.23		42.61	.000
Frequency	1.61	.16	.41	9.87	.000

Table 9: Simple Linear Regression Analysis of Driving Behaviour by Frequency of Drug Use
 $[F(1, 477) = 97.36, p < 0.05, R = .412, R^2 = .170]$

A simple linear regression was conducted to determine whether the frequency of drug use independently and significantly predict the driving behaviour of commercial drivers in Lagos metropolis. Results indicated that the frequency of drug use independently and significantly predicted driving behaviour among the sample, [$F(1, 477) = 97.36, p < .01$]. The analysis in the table above suggests that 17% variation in driving behaviour is explained by the frequency of drug use among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	33.32	1	33.32	10.60	.001 ^a
Residual	1495.61	476	3.14		
Total	1528.93	477			
Predictor	B	SE.B	B	T	P
(Constant)	.39	.11		3.56	.000
Frequency	.05	.02	.15	3.26	.001

Table 10: Simple Linear Regression Analysis of Accident Rate by Frequency of Drug Use
[$F(1, 477) = 10.60, P < 0.05, R = .148, R^2 = .022$]

A simple linear regression was used to determine whether the frequency of drug use independently and significantly predict accident rate of commercial drivers in Lagos metropolis. Results indicated that the frequency of drug use independently significantly predicted accident rate among the sample, [$F(1, 477) = 10.60, p < .01$]. The analysis in the table above suggests that 2.2% variation in accident rate is explained by the frequency of drug use among commercial drivers in Lagos metropolis. Based on this result the hypothesis is accepted. It is concluded that the frequency of drug use is a statistically significant predictor of driving behaviour and accident rate among commercial drivers in Lagos metropolis.

6.3. Hypothesis Three

Quantity of drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	44305.59	1	44305.59	117.09	.000 ^a
Residual	180111.44	476	378.39		
Total	224417.03	477			
Predictor	B	SE.B	B	T	P
(Constant)	52.27	1.17		44.58	.000
Quantity	.96	.09	.44	10.82	.000

Table 11: Simple Linear Regression Analysis of Driving Behaviour by Quantity of Drug Use
[$F(1, 477) = 117.09, P < 0.05, R = .44, R^2 = .197$]

A simple linear regression was employed to determine whether the quantity of drug use independently and significantly predict the driving behaviour of commercial drivers in Lagos metropolis. Results indicated that quantity of drug use independently and significantly predicted driving behaviour among the sample, [$F(1, 477) = 117.09, p < .01$]. The analysis in the table above suggests that 19.7% variation in driving behaviour is explained by the quantity of drug use among commercial drivers in Lagos metropolis.

Model	SS	Df	Mean ²	F	P
Regression	16.50	1	16.50	5.19	.023 ^a
Residual	1512.43	476	3.18		
Total	1528.93	477			
Predictor	B	SE.B	B	T	P
(Constant)	.47	.11		4.42	.000
Quantity	.02	.01	.10	2.28	.023

Table 12: Simple Linear Regression Analysis of Accident Rate by Quantity of Drug Use
[$F(1, 477) = 5.19, P < 0.05, R = .104, R^2 = .011$]

A simple linear regression was conducted to determine whether the quantity of drug use independently and significantly predict accident rate of commercial drivers in Lagos metropolis. Results indicated that quantity of drug use independently and significantly predicted of accident rate among the sample, [$F(1, 477) = 5.19, p < .05$]. The analysis in the table above suggests that 1.1% variation in accident rate is explained by the quantity of drug use among commercial drivers in Lagos metropolis. Based on this result the hypothesis is accepted. It is concluded that the quantity of drug use is a statistically significant independent predictor of driving behaviour and accident rate among commercial drivers in Lagos Metropolis.

7. Discussion of the Findings

The first hypothesis which states that drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos Metropolis was accepted. In line with this hypothesis, the use of these psychoactive substances by commercial drivers will in turn increase their chances of risky driving. The findings of this study are in-line with the work of Movig, Mathijssen, Nagel, van Egmond, de Gier, Leufkens and Egberts (2004) which examined the influence of psychoactive substance use on the risk of motor vehicle accidents and reported that drug use significantly increases the risk of road accidents. The finding, therefore supports Elvik (2013)'s report from a meta-analysis of evidence from epidemiological studies which reveals that use of drug while driving tends to have a larger effect on the risk of accidents, particularly fatal and serious injury accidents.

The second hypothesis which states that the frequency of drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos Metropolis was accepted. The findings imply that the more a commercial driver consumes substances, the higher his chances of engaging in risky driving behaviour. According to Albery, Strang, Gossop, and Griffiths (2000) in their study on illicit drugs and driving, it was reported that the differential beliefs about the effect of drugs on accident rate as well as driving performance were shown to be dependent upon frequency of drug consumption.

The third hypothesis which states that the quantity of drug use will independently significantly predict driving behaviour and accident rate among commercial drivers in Lagos Metropolis was accepted. The hypothesis was also tested with a simple linear regression analysis. The findings show that the quantity of drug use independently significantly predicts driving behaviour among commercial drivers in Lagos Metropolis. We can, therefore, deduce that the more the quantity of drug use, the higher the chances of risky driving behaviour among commercial drivers. The resulting analysis shows that the quantity of drug use significantly and independently predicts accident rate among commercial drivers in Lagos Metropolis.

8. Conclusion

Several factors account for risky driving behaviour and accidents leading to a huge number of injuries and deaths across the globe. The findings of this study have successfully established that drug use (frequency and quantity) significantly predicts driving behaviour, accident rate and passengers' injury by commercial drivers in Lagos Metropolis. Based on the study findings it is concluded that:

- Drug use independently significantly predicts accident rate among commercial drivers in Lagos Metropolis.
- The frequency of drug use independently significantly predicts driving behaviour and accident rate among commercial drivers in Lagos Metropolis.
- The quantity of drug use independently significantly predicts driving behaviour and accident rate among commercial drivers in Lagos Metropolis.

The findings of the study have provided an insight into the issue of drug use and driving behaviour among commercial drivers in Lagos Metropolis. The study findings revealed that the use of drugs among commercial drivers does not only increase chances of risky driving behaviour and high accident rates but also puts the lives of the drivers and passengers in jeopardy. Thus, the findings of this study have shown that drug use is a significant determinant of driving behaviour and accident rate, and passenger's injury among commercial drivers in Lagos Metropolis. To this end, findings from this study have contributed to the empirical literature on the relationship between drug use (frequency and quantity consumed) and the links with driving behaviour, accident rate and passengers' injury among commercial drivers.

In line with the findings of the study, it is recommended that commercial drivers should be psycho-educated to make them aware of the damaging and debilitating effects of drug use on themselves and others. It is hoped that this understanding would assist them to minimize driving errors, Highway Code violations, and aggression that negatively influence automobile accident. In conclusion, the study, therefore recommends that relevant policies and regulations should be put in place by the governments at all levels outlaw the use of the psychoactive and psychotropic drugs by commercial drivers and in all motor parks in the state.

9. References

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