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Psychoactive Substance Use Among Long Distance Vehicle Drivers In Ilorin, Nigeria

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SUMMARY

Background Globally, the association between psychoactive substance use and accidental injury or death has been acknowledged, with efforts being made to reduce accident rates in all means of transportation. While many studies have examined the use of psychoactive substances among many occupational groups, including drivers, not many has focused on substances use among long distance vehicle drivers.

Aim We determined the prevalence, pattern and factors associated with the use of psychoactive substances among long distance vehicle (LDV) drivers in Ilorin, Nigeria.

Method All consecutive consenting LDV drivers seen at the study period were interviewed using a modified, pilot-tested, semi-structured self-report questionnaire based on the World Health Organisation's guidelines for student's substance use survey.

Result It was found that the most currently used psychoactive substances were mild stimulants (31.9%), cigarettes (30.4%), anabolic steroids (27.5%) and alcohol (15.9%). Except for cigarettes, the other substances were used mainly for instrumental purposes. Only about 50% of the respondents had ever attended a health talk on drug abuse. High level of religiosity was less likely to be associated with current use of mild stimulants and sedatives. Current use of sedatives was also significantly associated with poor mental health.

Conclusion With only 50% exposure to drug abuse campaign among drivers, we suggest that more efforts should be made to enlighten LDV drivers on the dangers of substances use and abuse. Such campaigns should take advantage of religion and the strong influence of the Driver's Unions on member. These efforts, we hope, will go a long way in reducing loss of lives and properties on our roads. Though no significant association was found between current drug use and rate of accidents, we suggest a larger scope study be conducted to corroborate or refute this finding.

INTRODUCTION

The association between psychoactive substance use and accidental injury or death has been acknowledged for a long time. Alcohol, for example, is thought to contribute to 50,000 deaths per year and up to 500,000 hospital admissions annually in the United Kingdom (Humphis et al, 1991). In Nigeria, the Accidents and Emergencies units of most health facilities often have significant cases of road traffic (motor cars and motorcycles) accident victims. In motor car accidents, there is a 2-fold risk of having an accident if the driver has a blood alcohol concentration (BAC) of 80mg%. With a BAC of 100mg%, the risk increases to 7-fold, with a BAC of 150mg%, there is a 10-fold increase while a BAC 200mg% causes a 20-fold increase (BMA, 1998). Motorcycles have a 7-fold increase in the accident rate for vehicle person per mile and a 17-fold fatality rate compared with motor vehicles

(Sabey et al, 1980). A motor vehicle driver's performance is affected by a BAC of 50mg% while a pilot's ability to fly seems to be impaired at only 20mg% (Lowenfels et al, 1984). Flying under influence (FUI) has been reported to be responsible for 10-20% of fatal crashes of light aircraft (Lowenfels et al, 1984). In a study among 210 drivers in Luxembourg, 10.9% had used benzodiazepines, 9.5% had used cannabis, 22.7% were found to be poly-drug users, while 29.5% were chronic alcohol abusers (Appenzeller, 2005).

All over the world, concerted efforts have been, and are still being made, to reduce accident rates in all means of transportation. This is aimed at saving lives and properties which ultimately reduces waste of human and material resources. Such efforts include public enlightenment programmes against drug abuse, legislation against the use of psychoactive substances and counseling, among others (Adelekan et al, 2001). Some countries also give rewards to sober drivers (Odzemir et al, 2005).

The authors aim to contribute to these global efforts by focusing on a subgroup of drivers that are considered to be particularly prone to the use of psychoactive substances because they have to travel long distances and must keep awake. Often, long distance vehicle (LDV) drivers are away from their homes for long periods and may be prone to the use of psychoactive substances to ease tension and boredom. They may also engage in risky sexual behaviour due to the influence of drugs and alcohol. For those who engage in

intravenous use of drugs, there is also the risk of use of contaminated syringe and needles. These factors tend to make them prone to contracting HIV infection. In order to reduce the carnage on our roads and continue to stem HIV/AIDS, there is a need to take a closer look at this group of drivers. It is pertinent to state at this point that though the issue of HIV/AIDS among long distance vehicle drivers is important, it is beyond the scope of the objectives of the study. This study therefore, is aimed at determining the prevalence and pattern of psychoactive substance use among long distance vehicle (LDV) drivers in Ilorin and also determine the factors that are associated with the use of psychoactive drugs in this group of drivers.

METHODS

The setting

The study was conducted in Ilorin, the capital of Kwara State, Nigeria. The city is located in the middle belt of Nigeria and serves as a major transit point for commuters travelling from West to East and from North to South of the country. It has four major motor parks for commercial vehicles departing from or arriving into the city.

Sampling technique

All consecutive consenting LDV commercial drivers seen at the four major motor parks in Ilorin (*Maraba, Dangote, Saw mill and Offa garage*) within the study period of one month (15th August 2006 to 15th September 2006) were included into the study.

Instrument for data collection:

This consisted of a modified, pilot-tested semi-structured self-report questionnaire based on the World Health Organization's guidelines for student substance use survey (Smart et al, 1980). This instrument had been previously used in this environment among students and found reliable and valid (Adelekan et al, 2001, Adelekan et al, 1989, Adelekan et al, 2000). The modified questionnaire consists of items that sought information on the respondents' socio-demographic

characteristics, frequency of use of substances, types of substances used (alcohol e.g beer, palm wine; mild stimulants e.g *kola nut*, coffee; strong stimulants e.g *kwaya*), respondents' frequency of involvement in road traffic accidents, attendance at health talks on drug abuse, and suggested methods of curbing substance use. The modified semi-structured questionnaire was pilot-tested among 20 non-long distance vehicle drivers in a motor park (*Oloru*) that was not used for the main study.

Questionnaire administration

After due explanation of the purpose of the study, reassurance about the confidentiality of their responses, the consent of each respondent was sought and obtained. Thereafter, all respondents were assisted in filling the questionnaire.

Inclusion criteria

All licensed commercial long distance vehicle drivers (having a designated route of 500 km or more) seen at the interview points within the study period and who must have consented to be included in the study.

Data analysis

This was done using the Epi Info version 6.02 software. Frequency tables and means were generated and relevant cross tabulations done. Proportions were compared using chi-square test.

RESULTS

Sociodemographic characteristics:

Of the 95 eligible respondents, 69 (72.6%) consented to be included in the study. Table 1 shows that the respondents were aged 27 to 65 years (mean 44 ± 10.4 years). Sixty-six (95.7%) were married, 3 (4.3%) were single, 22 (31.9%) had no formal education, 34 (49.3%) had up to primary education while 12 (17.4%) had secondary education. Fifty-six (81.2%) claimed they were very religious, 10 (14.5%) were moderately religious while 3 (4.3%) were not religious. The distances travelled by the drivers ranged between 500 km to

1700 km (mean 991.3 ± 293.5 Km). These distances were covered with some stop-overs. The respondents made one to five trips per week with a mean of 2.5 and a S.D of 1.1.

Knowledge about psychoactive substances among respondents

Table 2 shows the knowledge of the LDV drivers about various psychoactive substances. Except for heroin (39.1%), at least 63% of the respondents have heard of all the remaining drugs. Specifically for cigarettes, alcohol, cannabis and sedatives, more than 90% of the respondents have heard about or seen them. Except for cocaine, heroin and strong stimulants, the majority (more than 60%) of the respondents claimed that the drugs were freely available. Between 70-98% of the respondents knew a user of all the drugs except 29% who knew a user of cocaine, 21.7% knew that of heroin while 36.2% knew that of strong stimulants. The most common substances ever offered to the respondents were mild stimulants (53.6%), cigarettes (50.7%), alcohol (30.4%), and solvents (21.7%).

Pattern of psychoactive substance use among LDV drivers

Table 3 shows the pattern and types of psychoactive substances used. The drugs most previously used in descending order were mild stimulants (56.1%), cigarettes (53.6%), alcohol (37.7%) and anabolic steroids (34.8%). The most currently used drugs were mild stimulants (31.9%), cigarettes (30.4%) and alcohol (15.9%). Table 4 shows that, among current drug users, cigarettes were used daily by 71.4% of the respondents, cannabis by 33.3%, alcohol by 18.2% and sedatives by 14.3%. The remaining substances were used for instrumental purposes only.

Factors associated with psychoactive substance use

The association between religiosity, physical well being, mental well being, previous history of road traffic accidents (RTA), number of RTAs and distance of route plied were determined

in relation to the current use of cigarettes, alcohol, cannabis, mild stimulants, sedatives and anabolic steroids. There was a significant association between religiosity and the current use of mild stimulants ($X^2=6.7$; $p=0.03$) and sedatives ($X^2=9.9$; $p=0.007$) with respondents with higher level of religiosity being less likely to be current users. The current use of other substances was not significantly associated with the level of religiosity. There was a significant association between current use of sedatives and

health and current use of alcohol, this did not attain a significant level ($X^2=5.7$; $p=0.06$). There was no significant association between distance of route plied and current use of psychoactive substances. There was no significant association between current use of cigarettes, alcohol, cannabis, mild stimulants, sedatives and anabolic steroids on the one hand and the incidence/ frequency of RTA and distance of route plied on the other hand.

Methods of curbing substance

abuse

A significant proportion 40 (58%) of the respondents suggested that LDV drivers who abuse substances should be reported to the Drivers' Trade Union for appropriate sanctions, 18 (26%) suggested they should be given health talks, 11 (16%) suggested they should be counseled, and 14 (20.3%) suggested they should be punished by law enforcement agents. Only 44 (64%) of the respondents had ever attended a health talk on drug abuse while 50 (72.5%) have heard about campaigns against drug abuse in the print/

Table1 Sociodemographic characteristics of LDV drivers

Variable	Frequency	Percentage
Age (years)		
Range	27-65	
Mean	44.0	
S.D	0.4	
Distance travelled (Kilometres)		
Range	500-1700	
Mean	991.3	
S.D	293.5	
No. of trips/week		
Range	1-5	
Mean	2.5	
S.D	1.1	
Driving experience (in years)		
Range	1-25	
Mean	5.0	
S.D	1.6	
Gender		
Male	69	100
Marital status		
Married	66	95.7
Single	3	4.3
Education		
No formal education	22	31.9
Primary	34	49.3
Secondary	12	17.4
Tertiary	1	1.4
Relationship with colleagues		
Not cordial	1	1.4
Cordial	68	98.5
Level of religiosity		
Not religious	3	4.3
Moderately religious	10	14.5
Very religious	56	81.2

perceived poor mental health ($X^2=9.2$; $p=0.01$). Though there was a trend towards an association between respondents' perceived poor mental

Table 2 Knowledge about psychoactive substance use among LDV drivers

Substance	Ever heard	Ever seen	Available locally	Know a user	Ever offered
Cigarettes	69 (100)	69 (100)	67 (97.1)	68 (98.6)	35(50.7)
Alcohol	66 (95.7)	66 (95.7)	64 (92.8)	63 (91.3)	21 (30.4)
Cannabis	59 (85.5)	56 (81.2)	42 (60.9)	48 (69.6)	8 (11.6)
Mild stimulant	66 (95.7)	67 (97.1)	67 (97.1)	67 (97.1)	37 (53.6)
Strong stimulant	49 (71)	34 (49.3)	30 (43.5)	25 (36.2)	2 (2.9)
Sedatives	58 (84.1)	54 (78.3)	51 (73.9)	44 (63.8)	11 (15.9)
Anabolic steroid	47 (68.1)	44 (63.8)	43 (62.3)	40 (58.0)	25 (36.2)
Cocaine	44 (63.8)	25 (36.2)	20 (29.0)	20 (29.0)	2 (2.9)
Heroin	27 (39.1)	16 (23.2)	15 (21.7)	15 (21.7)	2 (2.9)
Solvents	55 (80.9)	56 (81.2)	54 (78.3)	49 (71.0)	15 (21.7)

% in row brackets

Table 3 Frequency and pattern of psychoactive substance use among LDV drivers

Substance	Past use	Current use	Future use
Cigarettes	37 (53.6)	21 (30.4)	10 (14.5)
Alcohol	26 (37.7)	11 (15.9)	2 (2.9)
Cannabis	8 (11.6)	3 (4.3)	0 (0)
Mild stimulant	37 (56.1)	22 (31.9)	3 (4.3)
Strong stimulant	2 (2.9)	1 (1.5)	1 (1.4)
Sedatives	9 (13)	7 (10.1)	1 (1.4)
Anabolic steroid	24 (34.8)	19 (27.5)	1 (1.4)
Cocaine	2 (2.9)	0 (0)	0 (0)
Heroin	2 (2.9)	0 (0)	0 (0)
Solvents	11 (15.9)	6 (8.7)	2 (2.9)

% in row brackets

Table 4: Current psychoactive substance use among LDV drivers

Substance	No. of users	Occasional	Often	Daily
Cigarettes	21	3 (14.3)	3 (14.3)	15 (71.4)
Alcohol	11	3 (27.3)	6 (54.5)	2 (18.2)
Cannabis	3	0 (0)	2 (66.7)	1 (33.3)
Mild stimulants	22	10 (45.5)	7 (31.8)	5 (22.7)
Strong stimulants	1	1 (100)	0 (0)	0 (0)
Sedatives	7	5 (71.4)	1 (14.3)	1 (14.3)
Anabolic steroids	19	12 (63.2)	3 (15.8)	4 (21.1)
Cocaine	0	0 (0)	0 (0)	0 (0)
Heroin	0	0 (0)	0 (0)	0 (0)
Solvents	6	3 (50)	0 (0)	3 (50)

Occasional use (few times per month)

Often used (few times per week)

electronic media.

DISCUSSION

Except for cocaine and heroin, the study showed that the respondents had a good knowledge (ever seen, ever heard, ever offered and ever used) of the substances they were required to give information about. This is in keeping with previous studies, though among students, in the same environment (Adelekan et al 2001, Adelekan et al, 2000, Daramola, 2004) and other study centres in Nigeria (Ihezue, 1988, Akinhanmi, 1996). The most currently used psychoactive substances were mild stimulants (31.9%), cigarettes (30.4%), anabolic steroids (27.5%), and alcohol (15.9%). The significant use of mild stimulants had also been reported among undergraduates in the same study environment (Adelekan et al, 2000). Kola nut (the dried cotyledon of *kola acuminata*) is an example of a mild stimulant that is used by the respondents. It is easy to carry about and not offensive in odour. It is as acceptable socially as, if not better than, alcohol and cigarettes.

The LDV drivers tend to use it and most times keep some in their glove compartments as a ready substance used to keep awake. Within the group of current users, it is worthy of note that most of the substances except cigarettes were used for instrumental purposes. The use of anabolic steroids by a significant proportion of respondents might be due to the need for them to enhance their performance in loading and off-loading goods from their trucks. This might provide them with the opportunity to make extra money instead of paying other people to do the job. Further studies would however be required to find out other possible reasons why the respondents were abusing anabolic steroids.

A significant association was found between religiosity and the current use of mild stimulants ($X^2=6.7$; $p=0.03$) and sedatives ($X^2=9.9$; $p=0.007$) with those who are very religious being less likely to use mild stimulants and sedatives. Also a

significant proportion of current users of sedatives were less likely to have 'perceived good mental health'. The finding of inverse relationship between substance use and religiosity has been previously documented (Akinhanmi, 1996; Bell, 1997, Anochie et al, 2000). Also, previous studies have reported a significant association between substance use and poor mental and physical health (Adelekan et al, 1996, Tyssen et al, 1998).

Contrary to expectation, there was no significant association between current substance use and tendency to have a road traffic accident (RTA), frequency of RTA and the distance of route plied. This might be because respondents did not offer the correct opinion on this item as they would not want to be perceived as dangerous drivers. Also, the respondents that were interviewed might be the good drivers with a very low record of RTA hence they are still retained on their jobs after a mean period of 5 years. In some of the motor parks, we were told, rewards are often given for the most careful drivers. This would suggest some form of peer monitoring by the drivers which might positively influence their driving behaviour. Further studies with a wider scope of drivers (not limited to the motor parks) might throw more light on the association between current substance use and frequency of RTA and distance of route plied.

In spite of the various efforts of government and non-governmental agencies through different media, to discourage substance abuse, only a half of the respondents had ever attended a seminar/talk on drug abuse while only 72% had seen or heard of anti-drug abuse messages in print or electronic media. This would suggest a need to intensify efforts on campaigns against drug abuse.

We suggest that more of such messages be taken to the motor parks, with particular emphasis on using the drivers and their trade unions as a pressure group. Efforts should also be made to encourage giving rewards to drivers who are not only free of psychoactive substance use but

with least record of RTAs. The agencies responsible for maintaining safety on our roads, such as the Federal Road Safety Corps (FRSC), should intensify their efforts towards carrying out routine tests aimed at detecting, educating and sanctioning drivers who have substances beyond regulated safety limits in their systems. These efforts will go a long way in reducing bodily injury and waste of lives and properties on our roads.

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