Asian Journal of Medicine and Health

19(1): 18-25, 2021; Article no.AJMAH.65766
ISSN: 2456-8414

Pattern of Psychoactive Substances Use among Long-Distance Truck Drivers in Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors contributed to the conceptualisation, data collection and final writing of the article. Data analysis was done by authors AOA, TE and DMU. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJMAH/2021/v19i130293
Editor(s):
(1) Dr. Janvier Gasana, Kuwait University, Kuwait.
Reviewers:
(1) Enrique Rotemberg Wilf, School of Dentistry, Uruguay.
(2) Fernanda Marques Paz, Centro Universitário Cenecista de Osório (UNICNEC), Brazil.
(3) Veronica Vitriol, Universidad de Talca, Chile.
Complete Peer review History: http://www.sdiarticle4.com/review-history/65766

Original Research Article

Received 07 December 2020
Accepted 15 February 2021
Published 08 March 2021

ABSTRACT

Aims: This study was designed to examine the pattern of psychoactive drugs use among long-distance truck drivers in Ado-Ekiti, Ekiti state, Nigeria.
Study Design: This was a descriptive cross sectional study.
Place and Duration: The study was conducted at the converging motor park for truck drivers in Ado-Ekiti, south-west Nigeria between September and December 2019.
Methods: The pattern of psychoactive drugs use among 306 adult male truck drivers was determined using a semi-structured questionnaire in addition to a sociodemographic questionnaire. Data was analyzed and logistic regression was used to identify significant predictors of illicit drug use.
Results: Among the 306 study participants, 43.7% consumed alcohol. The major non-prescription drugs used by the truck drivers were cough syrups (67.0%); analgesics (49.3%); cannabis (39.9%); amphetamine/methamphetamine (33.0%) and tranquilizers (32.0%). Opioid analgesics like tramadol (35.1%) and morphine (22.3%) were the commonly used analgesics. The predictor of psychoactive drugs use among the long-distance truck drivers is the co-use of alcohol and tobacco (AOR (1.71) 95% CI (1.24–2.36%).

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Conclusion: There is a high rate of psychoactive drugs use among truck drivers. There is an urgent need to educate the truck drivers on the adverse implications of illicit drug use and the need to abstain for better health promotion.

Keywords: Psychoactive substances; drug misuse; drug abuse; illicit drugs; opiod analgesics.

1. INTRODUCTION

Globally, the illicit use of drugs for recreational or intoxicative purposes is a major public health challenge [1-4]. This is a major cause of social, mental, health and economic problems in sub-Saharan Africa (sSA), particularly in Nigeria [5-7]. The annual report of the deleterious effects of illicit and psychoactive drugs range from mental illness to severe organ failure and even death [8]. In 2018, illicit drug use had an estimated global mortality rate of168,000 deaths [9].

Most of the illicit drugs are psychoactive chemical substances prohibited by law [5]. These chemical substances are often harmful to the body system, addictive and could alter neuronal functions [9-11].The easy access to some of the illicit drugs in sub-Saharan Africa has contributed to the increasing abuse of drugs, like the widespread cultivation of cannabis in most regions in Nigeria, which is currently one of the highest consumers of cannabis and amphetamine in Africa [6,9].

The alteration in behavioural activities caused by the illicit drugs which are mimetics of neurotransmitters has effect on the neuronal axis particularly the dopaminergic neurons. The myriad of clinical manifestations are dose dependent which at low doses could result in euphoria, boost self-confidence, reduce fatigue and stimulate appetite while at higher doses or prolonged usage result in irritability, hallucinations, convulsions, cerebral haemorrhage, muscular hyperactivity and even death [8,10,12].

The prevalence of non-medicinal drug use among truck drivers is high and this has been ascribed to fatigue due to the stressful nature of their work [11,13-16]. This coping mechanism employed to tackle the rigors and stress of long-distance driving results in the use mostly self-prescribed medications which could be addictive[17,18].Driving under the influence of such drugs could affect other road users and increase the risk of road traffic accidents (RTA) as psychoactive drugs impair brain function by delaying cognitive actions [19,20].

There are few studies on psychoactive drugs use among long-distance drivers in Nigeria and none of such studies is documented in Ekiti State. Therefore, this study was designed to describe the prevalence and predictors of psychoactive drugs use among long-distance truck drivers in Ado-Ekiti, Ekiti state, Nigeria.

2. METHODS

This is a descriptive cross-sectional study among adult male long-distance truck drivers in Ado-Ekiti, south-western, Nigeria. It was conducted between September 2019 and December 2019 at the converging motor park for truck drivers in Ado-Ekiti, south-west Nigeria.

The calculation of the sample size was done using the Raosoft formula. In which the confidence interval of 95%, margin of error of 5% and the response distribution of 50% were imputed into the software [21]. The estimated sample size of 208 was increased to 306 to increase power of the study and consider for attrition.

The selection of the study participants using a systematic random sampling was adopted where all available truck drivers were numbered and the trucks with the odd numbers were selected daily for the study to avoid sampling bias. All the prospective study participants were given equal chances of selection by choosing the driver of the selected trucks. Eligible study participants were identified by the trained research assistants who obtained both verbally and written consent from the study participants.

All the study participants were 18 years and above, male long-distance truck drivers who consented to the study. They were assured of anonymity and confidentiality of the provided information. A semi-structured questionnaire was administered by trained research assistants to capture the socio-demographic information, and the commonly used medications among the drivers.

The data obtained were analyzed using IBM SPSS version 25 (SPSS Inc., Chicago, IL, USA).

Categorical variables were reported in mean and proportions and logistic regression was done to determine the predictors of illicit drug use. A p-value less than 0.05 was considered statistically significant.

3. RESULTS AND DISCUSSION

The socio-demographic characteristics indicates that the majority (66.0%) of the truck drivers are between 34 and 49 years of age. The mean age of the participants was 42.3 ± 9.1% years of age. The drivers have been in the profession for an average of 16.0 ± 8.4 years. About two-thirds of the study participants revealed they have been driving trucks for over 10 years (67.0%) on an average of 5.9 ± 0.9 days/week. Almost 60% of the drivers were overweight.

3.1 Pattern of Alcohol and Tobacco use among Truck Drivers in Nigeria

About four fifth of the drivers consumed alcohol of which 43.7% of these alcohol consumers are binge drinkers consuming more than five bottles of beer per day. Almost half (43.8%) of the drivers are tobacco users, while 64.9% of the participants consumed both tobacco and cannabis and 85.1% consumed tobacco and alcohol.

3.2 Distribution of Non-Medicinal Drug use in Long-Distance Drivers

Table 3 shows about two-third(67.0%) of the truck drivers took cough syrups for non-medicinal purposes, 49.3% misuse analgesics, 39.9% smoke cannabis, 33.0% misuse amphetamine /methamphetamine, 32.0% misuse tranquilizers. and 23.2% misuse cocaine. Other illicit drugs recorded in this study are; solvents/ inhalant (13.4%), heroine (13.1%), crack cocaine (11.4%), lysergic acid diethylamide (10.8%) and phencyclidine (10.8%).

3.3 Non Prescription Use of Pain-Killers among Truck Drivers in Nigeria

The common analgesics used by the truck drivers are acetaminophen (6.4%), ibuprofen (21.3%), tramadol (35.1%) and morphine (22.3%). About a quarter (22.3%) of these drivers used other analgesics apart from those above.

3.4 Factors Associated with Non-Medicinal Drug Use

The logistic regression analysis in Table 4 shows that alcohol and tobacco co-use (aOR: 1.711, *P* = .001) is a significant independent determinant of psychoactive drugs use among the truck drivers.

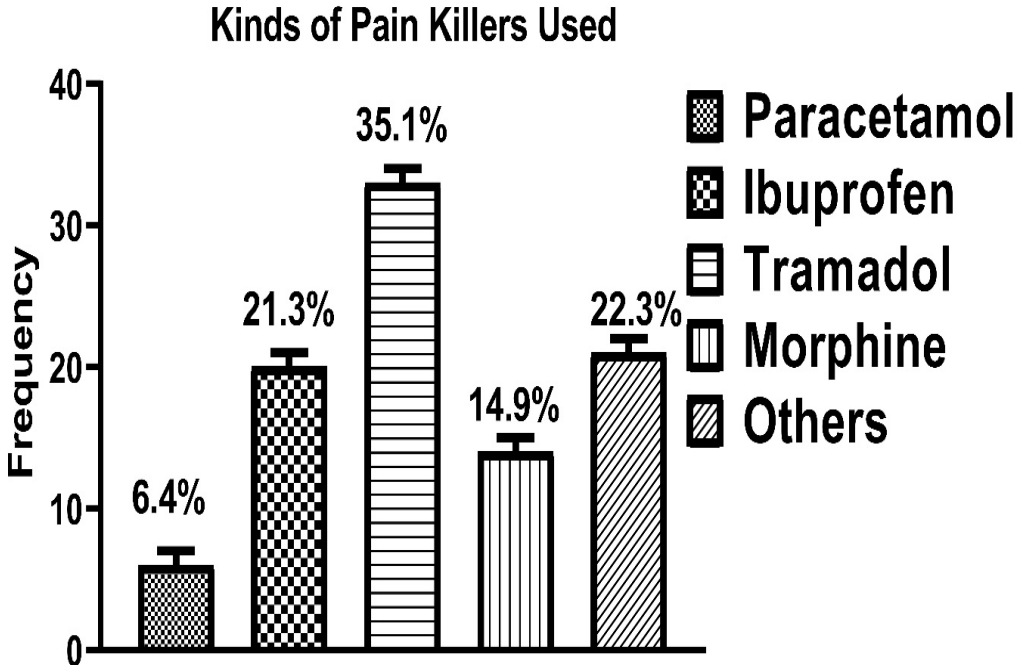

Fig. 1. Analgesics used by the long-distance drivers

Table 1. Baseline characteristics of truck drivers

Variable	N (%)	Mean ± SD
Age (years)		42.3 ± 9.1 years
>30	45 (14.7)	
30-49	202 (66.0)	
50 and above	59 (19.3)	
How long have you been in this driving profession?		
≤5 years	30 (9.8)	16.02 ± 8.4 years
6 –10 years	149 (48.7)	
Above 10 years	127 (41.5)	
BMI (Kg/m^2)		
< 25	57 (18.6)	27. 2 ± 3.88 Kg/m^2
25 - 29.9	183 (59.8)	
≥ 30.0	66 (21.6)	
Number of Working days/week (days)		
<4	3 (1.0)	
≥4	302 (99.0)	

Table 2. Pattern alcohol and tobacco use

Variable	Frequency N (%)
Do you consume alcohol	
Yes	236 (78.1%)
No	66 (21.9%)
Bottles of beer per day	
< 3 bottles	14 (4.6%)
3-5 bottles	90 (29.2%)
Above 5 bottles	132 (43.7%)
Do you smoke/snuff tobacco?	
Yes	134 (43.8%)
No	173 (56.5%)
Do you co-use tobacco and alcohol?	
Yes	114 (85.1%)
No (tobacco only)	20 (14.9%)
Do you co-use tobacco and Cannabis	
Yes	87 (63.9%)
No (tobacco only)	47 (35.1%)

Table 3. Pattern of non-medicinal drug use (N = 306)

Name of substance	Yes	No
Cannabis	122 (39.9%)	184(60.1%)
Cocaine	71 (23.2%)	235(76.8%)
Ecstasy	31 (10.1%)	275 (89.9%)
Tranquilizer	98 (32.0%)	216 (70.6%)
Analgesics	151 (49.3%)	155 (50.7%)
Amphetamines/ methamphetamine	101 (33.0%)	205 (67.0%)
Heroine	40 (13.1%)	266 (81.7%)
Lysergic acid diethylamide (LSD)	33 (10.8%)	273 (89.2%)
Phencyclidine (PCP)	33 (10.8%)	273 (89.2%)
Solvents/inhalants	41 (13.4%)	265 (86.6%)
Cough syrups	205 (67.0%)	101 (33.0%)

Table 4. Logistic regression analysis on factors associated with psychoactive drugs use

Determinants	aOR	95% CI	P Value
Alcohol and tobacco co-use	1.711	1.243 -2.36	0.001

3.5 Only Factors p < 0.05 were Included

From this study, 43.7% of the alcohol consumers amongst the study participants are binge drinkers who indicated that they co-use with cannabis while 85.1% of the drivers co-use tobacco with alcohol. Based on the study conducted; the top five (5) psychoactive drugs used by truck drivers are; cough syrups; opiod painkillers; cannabis; amphetamine/methamphetamine and tranquillizers. The drivers who use painkillers for non-medicinal purpose indicated a prevalent use of opioid analgesics; tramadol (35.1%) and morphine (22.3%). Significant predictor of psychoactive drugs use among truck drivers in Nigeria is the co-use of alcohol and tobacco; (AOR (1.71) 95% CI (1.24–2.36%).

Alcohol consumption has become a public health issue and studies have shown that heavy drinking is prevalent in Nigeria as 55% of alcohol users ingest more than 4 alcoholic drinks per/day [22,23]. Our study recorded 78.1% with 43.7% of the alcohol consumers being binge drinkers consuming more than four bottles of beer per day. Similar findings (71.6% prevalence in alcohol consumption) was reported among tanker drivers in Lagos state, Nigeria by Makanjuola et al. [24]. Alcohol consumption is the most significant risk factor for road traffic accidents as heavy alcohol consumption depresses the nervous system resulting in impaired decision making and risk-benefit analysis [23,25,26].

The prevalence of tobacco use in this study was 43.8%. Similar studies done among drivers have reported varying prevalent rates. A National survey on the use of tobacco among vehicle operators in the US revealed a prevalence of 34.0%. Other studies have also reported a 49.6 – 51.0% prevalence in tobacco use among long-distance truck drivers [27-30]. Much higher prevalence rate of 93.4% as reported among psychoactive substance users in a rehabilitation centre in Nigeria. [31]. The use of tobacco and alcohol among these drivers could be a coping mechanism for the rigorous demands of their profession. Previous studies have also associated the high prevalence of smoking among commercial drivers to the high level stress associated with the profession [32,33].

The trend of psychoactive drugs use (oral, inhalation and injection) from this study, in order of prevalence are; cough syrups (67.0%), pain killers, cannabis, amphetamine /methamphetamine, tranquilizers and cocaine. The misuse of cough syrups; especially those containing codeine have been reported in many countries including Nigeria [34-36]. Some of the identified psychoactive drugs commonly used by truck drivers which were also identified in our study are; amphetamine, cannabis, cocaine and over the counter stimulants [11,20]. Akande-sholabi et al. [36] reported in their study that cough syrup is the most misused among Nigerian youths particularly university students [36]. The self-reported and peer-reported data on truck drivers collected by Davey in 2007, also indicated that truck drivers use illicit drugs as a counter measure for fatigue [11].

Cannabis consumption was also prevalent among our study participants. Africa is the largest cultivator of cannabis and so it can be easily accessed. It has been reported that Nigeria is the highest consumer of cannabis in Africa [6,9]. Consumption of cannabis has both psychoactive and physiological effects some of which include; abnormal heart rate, reduced blood pressure, impairment of short-term working memory [37]. Nigeria is also currently the highest consumer of amphetamine in Africa, which also explains the prevalence of amphetamine/ methamphetamine use among our study participants [6].

It is well established that pain is associated with long-distance truck driving. Our study revealed that a considerable proportion of the truck drivers take tramadol (35.1%) and morphine (22.3%) for pain management. Opioid analgesics such as; tramadol and morphine are approved by FDA for treating moderate to severe pain especially in cancer patients. Presently, there are increased cases of diversion, misuse and overdose from these drugs [38].

Significant factor associated with psychoactive drugs use is alcohol and tobacco co-use. This implies that alcohol and tobacco co-use could serve as a gateway to the use of more potent psychoactive substances such as; cannabis, amphetamine and cocaine. According to the findings of Griffin et al. [39] on predictors of illicit drug use among adolescents; Alcohol and Cigarette smoking could increase the changes of illicit drug use [39]. Previous findings on the predictors of illicit drug use also indicates that drug abuse begins with alcohol and tobacco use first; which later graduates into the use of illegal substances [40,41].

A major limitation of this study is that the study fails to capture a broad spectrum of truck drivers in Nigeria. Being a cross-sectional study, we only surveyed long-distance truck drivers that converge in Ado-Ekiti, Ekiti state, Nigeria; as such, our study cannot be generalized to all truck drivers in Nigeria.

4. CONCLUSION

Many of the truck drivers surveyed in this study revealed that they misuse alcohol, tobacco, cough syrups, and pain killers (mainly opioid analgesics, particularly tramadol and morphine). A high prevalence in the use of psychoactive substances such as cannabis, amphetamine/ methamphetamine, tranquillizers and cocaine was also observed. There is a need to educate truck drivers on the need to abstain from the use of non-medicinal drugs. Furthermore, governmental bodies should implement policies that will regulate the working hours of truck drivers; this would minimize stress and reduction in stress levels could prevent drug misuse/abuse.

CONSENT

Informed consent of the patients was obtained before they were included in the study. Those who declined consent were not victimized in any way.

ETHICAL APPROVAL

Ethical approval was obtained from the Ethical Committee of Ekiti State University Teaching Hospital, Ado-Ekiti. Ekiti State. Nigeria.

ACKNOWLEDGEMENTS

The authors will like to acknowledge the support of the workers at the cement depot at Ado-Ekiti, Ekiti State. Nigeria.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/65766