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Optimistic Bias, Perceived Social Norms and Cannabis Use Among Road Transport Workers in Ibadan Metropolis

Gboyega E. Abikoye[1] & Adeniyi M. Sholarin[2]

[1]*Department of Psychology, University of Uyo, Uyo, Akwa Ibom State, Nigeria.*
[2]*Department of Psychology, Covenant University, Ota, ogun State.*

Corresponding Author:

Dr. Gboyega E. Abikoye: ageabikoye@yahoo.com

Abstract

The study assessed cannabis abuse among road transport workers (n = 360) across motor parks in Ibadan, southwest Nigeria. The role of optimistic bias and perceived social norms in cannabis abuse among this at-risk but often overlooked population. We hypothesized that cannabis abuse would be more prevalent among drivers relative to other categories of transport workers. We also tested the hypothesis that higher optimistic bias and perceived social norms would be associated with more cannabis abuse across the various categories of transport workers. Results indicated that 121(67.2%) of the drivers and 89 (49.4%) of other transport workers interviewed never used cannabis. Fifteen drivers (8.3%) and 22 (12.2%) other transport workers ex-users while 44 (24. 4%) of the drivers and 69 (38.4%) of other transport workers were current users of cannabis. Cannabis use debut was 21.4 (±4.7) for drivers and 19.3 (±4.3) for other transport workers respectively. Overall, scores on the cannabis abuse measure were very high for drivers (mean = 13.47±3.6) and other transport workers (mean = 15.22±3.45). Results also indicated that optimistic bias {F (1, 357) 7.35; p<.01} and perceived social norms {F (1, 357) = 19.06; p<.01} significantly influenced cannabis abuse. The need to target this at-risk but often overlooked population as well as the need to situate such interventions within salient psychological terrains was emphasized.

Key words: Cannabis abuse, optimistic bias, perceived social norms, transport workers, Ibadan, Nigeria

1. Introduction

Cannabis is one of the most widely used illicit substances in the world, and ongoing political debates about increased rampancy of use have caused a surge in interest regarding the potential health effects of chronic use. Studies examining the adverse health outcomes associated with cannabis use have focused primarily on respiratory, cardiac, and metabolic problems, as well as mental health problems such as depression, anxiety, and psychosis.

Given that cannabis is typically smoked, and decades of strong research have shown that tobacco cigarette smoking is a leading cause of lung cancer (Hecht, 1999), a natural question is whether cannabis is carcinogenic (Bowles, O'Bryant, Camidge, & Jimeno, 2012; Tashkin, 2013). Cannabis and tobacco cigarettes share many of the same toxic chemicals (Tashkin, 2013), and the British Lung Foundation recently announced that the smoke produced by a cannabis cigarette might contain 50% more carcinogens than the smoke produced by a tobacco cigarette (British Lung Foundation, 2012). Some cross-sectional (Aldington et al., 2008; Berthiller et al., 2008) and longitudinal (Callaghan, Allebeck, & Sidorchuk, 2013) studies have found that heavy cannabis users are more likely to develop lung, upper airway, or oral cancer than nonusers.

In addition to possible carcinogenic effects, there are also heightened concerns about whether cannabis is related to respiratory, cardiac, and metabolic problems. A recent review suggests that cannabis smokers tend to experience a greater number of respiratory problems than nonsmokers (Tashkin, 2013). For example, one longitudinal study found that frequent cannabis use across adolescence and young adulthood was associated with an increased risk of experiencing respiratory problems (e.g., sore throat, shortness of breath) at age 27, even after controlling for age, gender, childhood aggression, adolescent major depressive disorder, parental education level and income, and maternal cannabis use (Brook, Stimmel, Zhang, & Brook, 2008). In a cross-sectional study, researchers found that current cannabis users were more likely to report having chronic bronchitis, cough, phlegm production, wheezing, and abnormal breath sounds (without a cold) than non-using controls, and this effect remained after accounting for the effects of gender, age, current asthma, and tobacco cigarettes used per day (Moore, Augustson, Moser, & Budney, 2005).

Tetrahydrocannabinol, the principal psychoactive component of cannabis, is known to cause substantial increases in heart rate and moderate increases in blood pressure during intoxication (Sidney, 2002). One cross-sectional study found a dose-dependent relationship between the frequency of cannabis use (use in the past 30 days) and several cardiometabolic risk factors (e.g., elevated fasting glucose and insulin, triglycerides, systolic and diastolic blood pressure; Vidot et al., 2015). In addition, a case-crossover study of patients who suffered from a myocardial infarction found evidence that cannabis use may have triggered the attack in a small number of patients (Mittleman, Lewis, Maclure, Sherwood, & Muller, 2001), potentially because

of the acute effect that cannabis use has on heart rate.

Research on effects of cannabis use on various indices of mental health has produced fairly consistent evidence linking cannabis use with psychotic symptoms, anxiety and depression. Several studies have found that frequent adolescent cannabis use is associated with an increased risk for developing psychotic symptoms, particularly early onset psychosis (e.g., Casadio, Fernandes, Murray, & Di Forti, 2011; Moore et al., 2007; Semple, McIntosh, & Lawrie, 2005; Wilkinson, Radhakrishnan, & D'Souza, 2014). For example, a meta-analysis found that psychotic patients who used cannabis experienced an earlier onset of symptoms than psychotic patients who never used cannabis (Large, Sharma, Compton, Slade, & Nielssen, 2011). Furthermore, there is some evidence that regular cannabis use in early and middle adolescence might be a particularly salient risk factor for the development of psychotic disorders (Casadio et al., 2011; Decoster, van Os, Myin-Germeys, De Hert, & van Winkel, 2012; Hall & Degenhardt, 2000; Moore et al., 2007; Semple et al., 2005; Wilkinson et al., 2014), potentially because it disrupts the maturation of key brain structures in the prefrontal cortex during this developmental period (Casey, Tottenham, Liston, & Durston, 2005; Giedd, 2004, 2008; Paus, 2009; Spear, 2010).

Recent reviews suggest that regular cannabis use during adolescence may be associated with an increased risk for developing depressive symptoms, although the evidence remains somewhat mixed (Degenhardt, Hall & Lynskey, 2003; Moore et al., 2007). For example, several longitudinal studies found a significant relation between early cannabis use and subsequent problems with depression, even after

controlling for potential confounding variables (Arseneault et al., 2002; Bovasso, 2001; Brook, Brook, Zhang, Cohen, & Whiteman, 2002; Fergusson, Horwood, & Swain-Campbell, 2002; Patton et al., 2002). The effects of cannabis use on anxiety symptoms may be more acute and isolated in nature, as high doses can cause brief episodes of panic and anxiety attacks in some individuals (Crippa et al., 2009). For others, particularly long-term cannabis users, relaxation and stress relief are often cited as primary reasons for use (Crippa et al., 2009). However, longitudinal studies often combine depressive and anxiety disorders when investigating mental health outcomes associated with cannabis use (e.g., McGee, Williams, Poulton, & Moffitt, 2000), making it difficult to identify the unique relation between cannabis and anxiety symptoms.

Concerns about the safety of driving under the influence of cannabis are reflected in numerous experimental studies examining the effects of the drug on psychomotor performance, and epidemiological studies that calculate collision risk (Beirness, Simpson & Williams, 2006; Jones, Shinar & Walsh, 2004; Mann, Brands, Macdonald & Stoduto, 2003). Studies have also assessed the nature and extent of the effects of cannabis on a wide variety of cognitive and motor tasks (e.g., Ashton, 2001; Berghaus & Guo, 1995; Hartman & Huestis, 2013; Ramaekers, Robbe, & O'Hanlon, 2000). Performance deficits have been found in tracking, reaction time, visual function, concentration, short-term memory, and divided attention. Studies of driving performance (both simulated and on-road) show increased variability in lateral position in the lane, following distance, and speed as a function of cannabis use. Cannabis also impairs performance on divided attention tasks — those tasks that require the ability to monitor and respond to more than one source of information at a time. Cannabis also compromised the ability to handle unexpected events, such as a pedestrian darting out on the roadway. Combining cannabis with even small amounts of alcohol greatly increased the negative effects on driving skills (Downey, King, Papafotiou, Swann, Ogden, Boorman & Stough, 2013; Ramaekers, et al., 2000). A recent meta-analysis of studies concluded that cannabis doubled the risk of crash involvement (Asbridge, Hayden, & Cartwright 2012).

Cannabis is one of the most prevalent illicit drugs in the world (Ammett, 2000; Vergas & Trujillo, 2012). In 2012, between 125 million and 227 million people were estimated to have used cannabis, corresponding to between 2.7 and 4.9 per cent of the world population aged 15-64 years (United Nations

Office on Drugs and Crime: UNODC, 2014). West and Central Africa, North America, Oceania and, to a lesser extent, Western and Central Europe remain the regions with prevalence rates considerably higher than the global average. Over the past five years in North America, the largest cannabis herb market, prevalence rates have followed an upward trend (UNODC, 2014). Although recent epidemiological data from Asia are not available, experts from nearly half of the countries in Asia consider cannabis use to be increasing in the region. In some European countries, about 27% of the population (aged between 15 and 64 years) have tried cannabis at some time in their lives (Degenhardt, Chiu, Sampson, Kessler, Anthony, Angermeyer, Bruffaerts, & Wells, 2008), with consumption of the substance being more extensive among men than women. However, this disparity between the sexes regarding the consumption of cannabis has been decreasing in the last few years (Degenhardt et al., 2008).

One psychological variable that has featured prominently in many forms of risky behavior is optimistic bias. Optimistic bias is commonly defined as the mistaken belief that one's chance of experiencing a negative event is lower than that of one's peers. Based on health models such as the prototype/willingness model (Gibbons, Gerrard & Lane, 2003), if people underestimate their risk of experiencing a negative health outcome, they will be less likely to take precautions to prevent that outcome from occurring. Perceiving others as more at risk than oneself can predispose an individual to engaging in detrimental behaviors such as cannabis use.

Another psychological factor that may offer a valid explanation of cannabis use among transport workers is perceived social norms. The general definition of social influence is that health-related behavior is influenced by a person's social context. The behavioral social context can be represented by the behaviors of an individual's peers or family members (e.g., smoking) with whom the person interacts regularly, or by behaviors observed in a larger social environment such as the neighbourhood in which a person lives. The normative social context is represented in an individual's perceptions about the acceptability of a behavior derived from communications from network members, or by portrayals of behaviors in mass media such as television or movies (Brody, Flor, Hollert-Wright & McCoy, 1998). If a person considers a behaviour to be

normal and appropriate for him or her, then the likelihood is high that he or she would be more likely to engage in the behavior.

Illicit drug use, cannabis inclusive, continues to attract empirical attention among researchers worldwide because of the deleterious effects it portends for the users, the family and the society at large. Of specific interest and which is burdensome is the unprecedented recreational cannabis use among various populations. In Nigeria, cannabis is among the widely used illicit drugs at present. The National Drug Law Enforcement Agency (NDLEA, 2007) report showed an alarming 22% of the total Nigerian population using cannabis. Other studies spanning several decades indicated prevalence ranging from 0.4% 84% (Gureje, Degenhardt, Olley, Uwakwe, Udofia, Wakil, Adeyemi, Bohnert, & Anthony, 2007) across different populations.

Documented evidence in cross-sectional studies in Nigeria showed that current cannabis use varies across settings: from 9.4% to 26% (Eneh & Stanley, 2004), 0.6% (Makanjuola, Daramola & Obembe, 2007) 9% (Abikoye, Eze & Uchendu, 2014). Lifetime use ranged from 2.3% (Makanjuola et al, 2007) to 14.5% (Abikoye et al, 2014). Although vehicular drivers are commonly seen taken alcohol, cannabis and other psychoactive substances in the course of their journeys, the extents of this problem as well as the psychological underpinning of this have not been properly documented in Nigeria. An empirically-based understanding of the extent of cannabis abuse among transport workers and the psychological underpinning of such hazardous behaviour would go a long way in shaping advocacy and relevant intervention programmes aimed at mitigating the problem.

Substance use, especially cannabis use, is a common and worrisome theme in most road transport settings in Nigeria. Given the myriads of psychological, physical and social costs associated with this tendency, cannabis use among motor vehicle drivers and other transport workers portends a particularly dangerous phenomenon. Despite observation by commuters and other stakeholders with regards to this reality, the empirical literature is rather scanty on the subject matter. The purpose of this study is to explore the prevalence of cannabis use among transport workers in Ibadan as well as the role of optimistic bias and perceived social norms in cannabis abuse. Specifically, we hypothesized that cannabis abuse would be more

prevalent among drivers relative to other categories of transport workers. We also tested the hypothesis that higher optimistic bias and perceived social norms would be associated with more cannabis abuse across the various categories of transport workers.

2. Method

2.1. Participants/Setting

Participants were 360 road transport workers randomly selected from six motor parks in Ibadan metropolis. The selected motor parks were situated at Iwo Road/Wema, Agodi/Gate, Ojoo, Samonda/Sango, Mokola/Ore-meji, and Challenge/New Road areas of Ibadan. Sixty transport workers (30 drivers and 30 other transport workers) were selected from each park. Inclusion criteria were 18 years of age, formal educational attainment of at least completed secondary/high school with ability to read and write simple English language, and working full time as drivers or other transport workers (conductors, loaders, ticketers) in the transport setting. All participants were males aged at least 18 years (mean age of 29.45±6.58). Details of participants' demographic profile are presented in Table 1.

2.2. Measures

Socio-demographic variables were assessed by individual items on the questionnaire requesting participants to furnish information regarding age, level of education, religion, marital status, and number of years of working in the transport setting.

Cannabis abuse was assessed using the *Cannabis Abuse Screening Test (CAST)*. Developed by Legleye, Karila, Beck and Reynaud (2007), the six-item CAST is a short scale which assesses extents of problematic cannabis use in the general population. The scale is scored along a five-point response options ranging from "Never" (0), "Rarely" (1), "From Time to Time" (2), "Fairly Often" (3) to "Very Often" (4), and with higher scores denoting more cannabis abuse. The instrument has adequate psychometric properties including at least .72 internal consistency (using Cronbach's coefficient) across many studies. In addition, Legleye et al (2007) reported several correlations of the CAST score with psychopathological dimensions of the Problem Oriented Screening Instrument for Teenagers (POSIT) that measures psychological, physical and social health impairments, with higher-scoring students (on CAST) also reporting worse physical and

mental health and more school problems than their low-scoring counterparts. In the present study, a coefficient alpha of .89 was obtained for the CAST.

Optimistic bias was assessed with the Life Orientation Test—Revised (LOT-R: Scheier, Carver & Bridges, 1994). The LOT-R provides continuous distributions of scores on the extent to which people are optimistic or pessimistic about their chances in various situations. The six-item instrument is scored using a five-point scale ranging from "I agree a lot" (5) to "I disagree a lot" (1). The six items on the scale are framed with three in each direction. The LOT-R has good internal consistency, with Cronbach's alpha in the high .70s to .80s, and is quite stable over time (Scheier et al, 1994). A Cronbach alpha coefficient of .78 was reported for the scale in a recent study in Nigeria (Abikoye, 2012). In the present study, the Cronbach's alpha coefficient was .81.

Perceived social norm was assessed using the adapted 12-item Perceived Norms about Cannabis Use scale (Brody et al, 1998). Each item is scored along a five-point scale ranging from "totally acceptable" to "totally unacceptable," with higher scores indicating that a respondent perceives cannabis use to be normal for him or her. A Cronbach's alpha coefficient of .81 was obtained for the scale in this study.

Procedure

The authors sought and obtained necessary approval from management of the various motor parks used in the study. Cluster sampling was used to select the twelve motor parks based on commuter density (the twelve motor parks selected were the major, high-density parks in Ibadan). Purposive sampling method was used to administer questionnaire to participants. Questionnaires were personally administered to participants by three Research Assistants, after obtaining participants' informed consent, over a four-week period.

3. Results

Results indicated that 121(67.2%) of the drivers and 89 (49.4%) of other transport workers interviewed never used cannabis. Fifteen drivers (8.3%) and 22 (12.2%) other transport workers ex-users while 44 (24. 4%) of the drivers and 69 (38.4%) of other transport workers were current users of cannabis. Cannabis use debut was 21.4 (±4.7) for drivers and 19.3 (±4.3) for other transport workers respectively. Age

at regular cannabis use was 26.9 (±5.5) for drivers and 24.7 (±5.2) for other transport workers respectively. A sizeable number of participants reported driving after cannabis use (20% and 32.2% for drivers and other workers respectively). Participants had made attempts to quit cannabis use (59.3% and 72.5% for drivers and other workers respectively) but many have found it difficult to quit (81.8% and 72.7% for drivers and other workers respectively). Mean scores for optimistic bias were 19.21 (±3.85) and 18.35 (±2.83) for drivers and other categories of transport workers respectively. On perceived social norms for cannabis use, mean scores were 36.28 (±8.33) and 33.27 (±4.55) for drivers and other categories of transport workers respectively. Overall, scores on the cannabis abuse measure (CAST) was very high for drivers (13.47±3.6) and other transport workers (15.22±3.45).

Table 1: *Participants' demographic, psychological and cannabis use profiles*

Variable	Mean (SD) / n (%) *Drivers (n = 180)*		Mean (SD) / n (%) *Others (n = 180)*	
Age	36.45 (**7.3**)		33.26 (**4.3**)	
Years of Education	14.15 (**3.1**)		13.22 (**2.3**)	
Marital status				
Single		72 (**40.0**)		85 (**47.2**)
Married		81 (**45.0**)		61 (**33.9**)
Divorced/separated		27 (**15.0**)		34 (**18.9**)
Cannabis use Status				
Never Use		121 (**67.2**)		89 (**49.4**)
Ex-User		15 (**8.4**)		22 (**12.2**)
Current User		44 (**24.4**)		69 (**38.4**)
Cannabis use debut	21.4 (**4.7**)		19. 3 (**4.3**)	
Age at regular use	26.9 (**5.5**)		24.7 (**5.2**)	
Cannabis use and driving?				
Yes		36 (**20.0**)		58 (**32.2**)
No		144 (**80.0**)		122 (**67.8**)
Optimistic Bias	19.21 (**3.85**)		18.35 (**2.82**)	
Perceived Social Norms	36.28 (**8.33**)		33.27 (**4.55**)	
CAST score	13.47 (**3.62**)		15.22 (**3.45**)	

Results of the inter-correlation analysis of the demographic (age, education, work type, years of experience), cannabis use-related information (cannabis use debut, age at regular cannabis use, cannabis use and driving, previous quit attempt, difficulty quitting), psychological variables (optimistic bias and perceived social norms) and CAST scores are presented in Table 2. Younger transport workers are more likely to use

cannabis (r = -.39; p<.01). Having lower education is more associated with cannabis use (r = -.42; p<.01). Other transport workers are more likely to use cannabis relative to drivers (r = -.18; p<.05). The lower the work experience (r = -.58; p<.01), cannabis use debut (r = -.40; p<.01) and age at regular cannabis use (r = -.38; p<.01), the higher the CAST scores. Higher optimistic bias (r = .42; p<.01) and perceived social norms for cannabis use (r = .39; p<.01) were associated with more cannabis abuse (i.e. higher CAST scores).

***Table 2**: Inter-correlation matrix for age (1) education (2), work type (3), years of work experience (4), age at first use (5), age at regular use (6), cannabis use and driving (7), previous quit attempt (8), difficulty quitting (9), optimistic bias (10), perceived social norms (11) and CAST score (12).*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age											
2. Education	.19*										
3. Work type	-.45**	-.36**									
4. Years of experience	.47**	-.29**	-.07								
5. Age at first use	.45**	.05	-.05	.11							
6. Age at regular use	.30**	.17*	.01	-.02	.19*						
7. Cannabis and driving?	-.22*	-.15*	.16*	-.22*	-.39**	-.36**					
8. Previous quit attempt?	.23*	.09	-.03	.20*	-.38**	-.39**	-.01				
9. Difficulty quitting?	.16*	.11	.10	.14*	-.35**	-.36**	-.03	.11			
10. Optimistic Bias	-.25*	-.12	-.19*	-.23*	.09	.12	.33**	-.12	.17*		
11. Perc. Social Norms	-.18*	-.07	-.15*	-.14*.	.11	.13	.24*	-.17*	.15*	.44**	
12. CAST score	-.39**	-.42**	-.18*	-.58**	-.40**	-.38**	.47**	-.39**	-.26*	.42**	.39**

NB: *p< .05; ** p <. 01

Coding of dichotomized variables: Work type (Drivers = 1, other transport workers = 2), cannabis use and driving (Yes = 1, No = 0), previous quit attempt (Yes = 1, No = 0), difficulty quitting (Yes = 1, No = 0).

We further explored the role of the psychological factors on cannabis abuse by performing a 2 x 2 analysis of variance (ANOVA). Optimistic bias and perceived social norms for cannabis use both were both dichotomized into high and low. Results of the ANOVA are presented in Table 3. Results indicated that optimistic bias significantly influenced cannabis abuse {F (1, 357) = 7.35; p<.01}. Perceived social norms also significantly influenced cannabis abuse {F (1, 357) = 19.06; p<.01}. Examination of the mean scores across these conditions further indicated that transport workers with high optimistic bias scored significantly higher (mean = 17.38) than those with low optimistic bias (mean = 11.04) on the cannabis abuse measure. Similarly, transport workers that were high on perceived social norms scored significantly higher (mean =

18.13) on the cannabis abuse measure than their counterparts who reported low perceived social norms (mean = 9.82).

Table 3: Analysis of variance for optimistic bias and perceived social norms on cannabis abuse

Source	SS	df	MS	F	p
Optimistic Bias (OB)	845.01	1	845.01	7.35	<.01
Perceived Social Norms (PSN)	2191.88	1	2191.88	19.06	<.01
OB x PSN	318.95	1	318.95	2.77	NS
Error	7704.19	357	114.99		
Total	11060.03	360			

4. Discussion

The study examined cannabis abuse among motor drivers and other transport workers in Ibadan metropolis. We found that 24.4% of drivers interviewed and 38.4% of other transport workers were current cannabis users. This finding is consistent with epidemiological evidence on cannabis use among other populations in Nigeria (e.g. Abikoye et al., 2014; Eneh & Stanley, 2004; Makanjuola et al, 2007). The prevalence rates, however, were significantly higher in the present study relative to these previous studies (mainly student populations) which ranged between 0.6% to 26%.

Findings also indicated that scores of participants on the cannabis abuse measure were high across the two groups. This finding, although frightening given the implications for road safety, is not particularly surprising. Not a few passengers have observed licit and illicit drug use (especially cannabis and alcohol) around various motor parks in Ibadan and other parts of Nigeria. At times such substance use is continued even in the course of the journey. As noted by numerous researchers, there are considerable risks associated with cannabis use among motor drivers (Ashton, 2001; Beirness et al, 2006; Berghaus & Guo, 1995; Downey et al, 2013; Hartman & Huestis, 2013; Jones et al, 2004; Mann et al, 2003, Ramaekers et al, 2000) and stakeholders are becoming increasingly worried by the seemingly unmitigated use of cannabis among drivers. Given the tendency for performance deficits and enormous risks attributable to driving after cannabis use such as collision risk (Beirness et al, 2006; Jones et al, 2004; Mann, et al, 2003), cognitive and motor

tasks impairment including but not limited to deficits in tracking, reaction time, visual function, concentration, short-term memory, and divided attention (Ashton, 2001; Berghaus & Guo, 1995; Hartman & Huestis, 2013; Ramaekers et al, 2000), and reduced ability to handle unexpected events, such as a pedestrian darting out on the roadway (Downey et al, 2013; Ramaekers, et al., 2000), these concerns among stakeholders are not unfounded.

We also found that other transport workers reported higher levels of cannabis abuse than drivers. This could be due to the fact that motor drivers are often on the road while the other transport workers operate mainly at the park, where cannabis could be easily obtained and used. The fact that the other categories of transport workers are stationary for most of the day means that they not only have more access to cannabis but they also have the opportunity to use the substance illicitly. Unlike drivers who could only use before taking off at the park or when they have cause to stop along the way. The implication of this finding is that the dynamics of the transport work should be properly investigated in all its ramifications with a view to having a more robust and comprehensive understanding of the problem.

Findings of the present study also indicated that most cannabis users had started using the substance by age 21 years. This finding implies that transport workers of this particular age range should be specifically targeted for cannabis abstinence psycho-educational intervention. Of more startling implication is the finding that as high as 20% and 32.2% of drivers and other workers respectively reported driving after cannabis use. If this is extrapolated to the general drivers' population in Nigeria, it means that one in every five of the drivers use cannabis while driving. The considerable risks that this reality portends for human and vehicular safety cannot be overemphasized. Also noteworthy is the finding that majority of participants had made attempts to quit cannabis use (59.3% and 72.5% for drivers and other workers respectively) but many have found it difficult to quit (81.8% and 72.7% for drivers and other workers respectively). This underlie the need for more efforts to be devoted to cannabis cessation interventions such as behavioural and psychological strategies. This becomes imperative given the addictive nature of the substance.

Age, lower education, lesser year of experience, early cannabis use debut and early regular cannabis use are significantly associated with elevated risks of cannabis abuse. The reasons are not far-fetched given

that younger persons are generally more susceptible to risky, impulsive behaviour relative to more mature individuals. Likewise, persons of relatively lower educational attainment, those that are still relatively new on the job, and those who started using cannabis earlier, are more prone to cannabis abuse. The import of these findings is that these categories of drivers and transport workers should be particularly targeted for preventive and ameliorative intervention.

Finally, we found that optimistic bias and perceived social norms were significantly associated with cannabis abuse. Tendency to underplay one's vulnerability in health-related and other salient matters, optimistic bias, was found to be significantly associated with increased number of cannabis abuse among transport workers. This finding corroborates such health models such as the prototype / willingness model (Gibbons et al. 2003) that if people underestimate their risk of experiencing a negative health outcome, they are less likely to take precautions to prevent that outcome from occurring. This is especially the case when such individuals perceive the behaviour to be socially normal for members of their group. In Nigeria, the "it-won't-happen-to-me" syndrome is especially prevalent. To justify their cannabis use/abuse habit and water down the health risks it poses, a user would readily cite examples of strong and healthy current users who are in their eighties or nineties. The implication for this tendency vis-a-vis cannabis abuse is that intervention effort should also target changing beliefs and attitudes.

Based on the findings and discussion of the present study, it is safe to conclude that incidence of cannabis abuse is quite high among transport workers in Ibadan. It is also apparent that contrary to the belief in many quarters, drivers are actually less at risk than other categories of transport workers. Factors such as younger age, lower education, less work experience, early cannabis use debut, early age at regular cannabis use and psychological variables are all associated with more cannabis abuse. A considerably high proportion of transport workers use cannabis while driving. We recommend that the transport settings should be targeted for substance abuse, especially cannabis abuse intervention. Transport workers, as an at-risk population, have received a disproportionately scanty research attention, especially in Nigeria where transport business is a thriving venture. It is recommended, therefore, that researchers and other stakeholders should devote

adequate attention to this vulnerable population. The fact that, on the average, about 60% of cannabis users had made (unsuccessful) attempts to cannabis use and admitted their need for help to quit due to the difficulty in unaided quit attempts imply that more efforts should be devoted to formulating and implementing relevant policies, advocacy and ameliorative interventions such as behavioural and psychological strategies.

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