

Original Research Article

Substance Use and Perceived Consequences on Health and Safety among Commercial Motorcyclists in Ibadan North Local Government, Ibadan, Nigeria

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ABSTRACT

Introduction: Motorcycling is a globalized mode of transport patronized by many road users especially in Nigeria. Although, fraught with negative health outcomes. This study sought to access the perceived consequences of substance use on health and safety among commercial motorcyclists in Ibadan, Nigeria.

Design and Method: Using a cross-sectional survey design, registered and consenting eighty commercial motorcyclists were recruited. A 39 item, interviewer-administered questionnaire containing motorcyclists' demographic characteristics, perceived consequence of substance use, behaviour towards substance use and consequences of substance use was used to obtain information. Collected data was analyzed at $p \leq 0.05$ of significance.

Results: The respondents were mainly within 30-39 years (36.3%); previously traders (42.5%) and have attained secondary school level of education (45.0%). Though, 57.5% of the respondents positively affirmed the ability of an individual under the influence of alcohol

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to cause accident, 46.3% of them hold the belief that it is good for mood modification and did not affect health negatively (70%). Up to 36.2% of the respondents agreed to have used substances while driving. Enhancement of visibility while driving (51.3%), relaxation (47.5%) and assists in forgetting problems (42.5%) were reasons given by motorcyclists for this. Fifty percent of the motorcyclists have been involved in a fatal accident. There no significant association between educational level and perception about substance use at $p=0.258$ but association between perception on substance use and age of respondents was significant at $p=0.05$. The Perception and Behavior of motorcyclists' Riders were significantly different at $p=0.04$.

Conclusion: Although, the respondents know that substance use had some negative consequences, yet many still indulged in it even when on duty. Positive behavioural change interventions should be implemented among motorcyclists.

Keywords: Perception, Consequences, Substance use, Health, Commercial Motorcyclists

1. INTRODUCTION

Globally, deaths and injuries resulting from road crashes are a major and growing public health problem (1). More than 20 million people are severely injured or killed on the world's roads each year and the burden falls most heavily on low-income countries in Africa, Latin America and Asia who are used to bicycles and motorcycles as means of transportation (1). Per vehicle mile traveled, motorcyclists have a 34-fold higher risk of death in a crash than people driving other types of vehicles (2). Their mortality rate in the United Kingdom (UK) per million vehicle kilometre is approximately twice that of pedal cyclists and over 16 times that of car drivers and passengers (3). Generally, motorcycle riders are less protected from accidents and they are at greater risk than drivers and passengers of cars and motor vehicles (1). About 70-90% of road deaths in Thailand and 60% in Malaysia were reportedly among users of motorized two wheelers (3).

Motorcyclists constitute an important group of road users globally (3). In the Taiwan Province of China, an increase in the use of motorcycles was reportedly associated with increasing deaths and injuries. Similarly, a study in Brazil reported that, motorcyclists had an eight-fold risk of dying, a four-fold risk of injury and a twofold risk of running over pedestrians as compared to automobile drivers (1). In many developing countries, motorcycles are an increasingly common means of transport which emerged as a result of the obvious inability of most nations to adopt an enduring public transport policy as a major mode of transport (4). In India, for instance, 69% of the total number of motor vehicles is motorized two-wheelers and in Vietnam, the number of motorcycles has grown from 500,000 to 10,000,000 in the past 10 years (3). In Nigeria, commercial motorcycles constitute one of the chief modes of transportation and by far, the most common form of informal transport (4–6). There has been

50 a phenomenal increase in the use of motorcycles for commercial purposes in most rural
51 cities of Nigeria in the last few years. For instance, as at 2008, there were over 120,000
52 motorcyclists in Akwa Ibom State alone, which is just one of the 36 states in Nigeria (3).

53 The use of motorcycles for passenger transport gained acceptance and wide
54 recognition in Nigeria after the economic recession of the early 1980s (1,6). The lack of
55 adequate and sustainable public transport cum poor urban planning in most Nigerian cities
56 created a transport gap for the motorcycles to fill in passenger transportation needs (5).
57 Motorcycle use as a means of transportation in Nigeria heightened due to its convenience,
58 affordability, easy maneuverability and ability to navigate through poor road networks and
59 traffic congestions found in large and commercial cities, compared to four wheeled vehicles
60 (7). For residents in urban cities, motorcycling is a popular means of transportation for
61 selected persons who cannot maintain their cars for economic reasons and unemployment
62 constraints (4).

63 However, motorcycles riding are associated with a lot of negative health outcomes.
64 Motorcyclists are about 35 times more prone to die than passenger car occupants and 8
65 times more likely to be injured (7). Also, they have a 7 fold increase in the accident rate for
66 vehicular person per mile and a 17 fold fatality rate compared with motor vehicles (8). A
67 substantial number of road crashes in Nigeria involve motorcyclists. Evidence shows that,
68 motorcycles accounted for 42% of crashed vehicles in the year 2000; 43.7% in 2004;
69 26.34% in 2008 and 22.7% in 2009. The percentage involvement of motorcycles in the
70 decade data (2000- 2009) stood at 26.24%. This means that one in every four vehicles
71 involved in crash is a motorcycle (5).

72 Motorcycling is the mode of transport involving by far the greatest risk (2–4). The
73 factors associated with risk from motorcycling operate at three levels according to (4,5).

- 74 • the agent (vehicle),
- 75 • the host (road user) and
- 76 • the environment (road-condition)

77 Although, other examples of host factors have been documented (lack of road safety
78 education, flaunting of legal age of driving, overloading while driving, inability to identify and
79 use road safety codes, lack of riding license, helmets, goggles and fire extinguishers by
80 (1,3–5,9,10), the use of substance and its risk of injuries had been implicated among those
81 involved in motorcycling activities (11,12).

82 In 2002/2003, according to National Survey on Drug Use and Health (NSDUH)
83 report (13), 16.6% of adult drivers aged 21 or older (an estimated 30.7 million persons)
84 reported that, they had driven while under the influence of alcohol during the past year.
85 Among drivers of this age group, 15.7% had driven under the influence of alcohol during the

86 past year and 3.0% had driven under the combined influence of alcohol and drugs during the
87 past year. Also, in 2003, 10.9% of motorcyclists that were involved in fatal motor vehicle
88 crashes were reported to have driven under the influence of alcohol (13). Canadian drivers
89 reported having driven within two hours of using a potentially impairing substance. The
90 Canadian Addiction Survey found out that 4.8% of drivers in Canada admitted having driven
91 within two hours of using cannabis at least once in the past year (14). Marijuana is the
92 substance used most often (70%) by drivers and is the leading cause of death among young
93 Americans (7).

94 In a study by Adogu et al (2) on predictors of Road Traffic Accident (RTA) in Nigeria,
95 alcohol intake among the motorcyclists was found to be an obvious predictor of RTA and
96 death. A high prevalence of 59.5% of RTA that was associated with the use of psychoactive
97 drugs was found among motorcyclists according to a study conducted by Muazu and Aliyu
98 (11) in Zaria, Nigeria. The National Highway Traffic Safety Administration (NHTSA) has
99 reported an increasing numbers of motorcycle deaths associated with alcohol-impaired
100 driving in recent years, especially among persons aged ≥ 40 years (15). Substance or drug
101 refers to all psychoactive substances which when taken by a living organism may modify its
102 perception, mood, cognition, behaviour or motor function. This includes alcohol, tobacco,
103 solvents, marijuana or Indian hemp, caffeine (Kola), coffee, cannabis, cocaine,
104 benzodiazepines, palm wine and 'paraga'(an alcoholic herbal mixture) (7,11,16–19).

105 The various reasons for substance use include: to enhance performance while
106 driving (10); keeping awake, suppression of fatigue, and peer group effect are additional
107 factors influencing psychoactive substance use among motorcycle riders (11,17). Although,
108 the misuse of drugs has long been considered a major social problem, the acute and
109 devastating consequences of driving while under the influence of drugs has only recently
110 come to the forefront as a public health and safety issue (14). Substance use can be harmful
111 and its effects can be both immediate to health or long term. Injuries such as bruises,
112 lacerations and fractures of upper and lower limbs can have immediate effects on health
113 (11). Substance use also affects cognitive development and short-term memory and also
114 has Long-term effects like nausea, insomnia, and loss of weight, convulsions and depression
115 (20). Neuro-trauma cases have been reported by respondents who used alcohol (9). Of the
116 537 cases in a study of road accidents in South East Nigeria, 68.3% were related to
117 motorcycles (21). Alcohol consumption has been implicated to be a cause of liver cirrhosis in
118 developed countries (18). Also, there is a strong association between heavy alcohol use and
119 tuberculosis (22).

120 Although, it is well known, that psychoactive substances impair driving performance
121 and threatens safety of motorcycle riders (13,23), there is dearth of information regarding

122 perception of motorcycle riders concerning consequence of use of substance to the health
123 and safety of commercial motorcyclists for which this study was designed to assess. Thus
124 this study sought to determine commercial motorcyclists' perception on substance use and
125 its consequences on health and safety. Without evaluating the situation through research
126 many of the public views about substance use among motorcyclists will be based on
127 assumptions. The findings will help to plan measures to correct any wrong perceptions.
128 The following Null Hypotheses were tested:

129 There is no significant association between perception of substance use and age of the
130 Commercial Motorcyclists.

131 There is no significant association between perception of substance use and educational
132 status of the Commercial Motorcyclists.

133 There is no significant difference between Respondents' perception and behaviour towards
134 substance abuse.

135 **2. MATERIAL AND METHODS**

136 The study which utilized descriptive cross-sectional design was conducted in Ibadan North
137 Local Government Area of Oyo State among commercial motorcyclists. The major types of
138 commercial transport in the town are minibuses, taxi-cabs and motorcycles. The study
139 period was between April 2010 and March 2011. At the time of the study, there were 120
140 registered members of the association of motorcycle riders. All registered commercial
141 motorcyclists were included in the study. The motorcyclists not involved in commercial
142 transportation were excluded from the study. Sample size was calculated using Krejcie and
143 Morgan (24) formula for calculation of sample size.

144
$$s = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

145
$$s = \frac{3.841 \times [120 \times 0.5] (1-0.5)}{0.05^2 (120-1) + 3.841 \times .50(1-0.50)}$$

146
$$s = \frac{3.841 \times 30}{0.2975} + 3.841 \times 0.25$$

147
$$s = 116.13 \div 1.25775$$

148
$$s = 92$$

149 Convenient sampling method was used to collect data from the 80 motorcyclists that
150 gave their consent to participate in the study. Structured interviewer administered

questionnaire was used to collect information on socio-demographic characteristics, perception of commercial motorcyclist on consequences of substances, their behaviour towards consequences of substance use on health and safety and the effects of substance use. The Cronbach's Alpha reliability Coefficient of the instrument was 0.703. Permission was obtained from the leaders of motorcyclists' association to conduct the study and their assistance was duly provided in the mobilization of members. Informed consent from the individual motorcyclists was obtained before the administration of the questionnaires. The data was collected by the researchers with the aid of a research assistant.

The data collected were coded and analyzed using SPSS version 15. Perception was accessed using the various questions on perception to see their views about substance use this was scored and categorized into high for those with over half of the expected score and low for those below the expected score. The Perception was cross-tabulated with age and educational status as well as behaviour of respondents towards substance use. Behaviour was determined by using questions that assessed whether they were using substances or not. Statistical methods used included frequency counts and Chi square test statistics was used to test associations between categorical variables with the level of significance set at $p \leq 0.05$.

3. RESULTS AND DISCUSSION

The socio-demographic information of respondents presented Table 1 shows that majority of the respondents were within the age of 30-39 (36.3%), were married (73.0%) with Christianity (46.8%) as their religious affiliation. Also, greater proportion (72.5%) were of Yoruba ethnicity. Educationally, 47.5% had completed secondary education and 42.5% had been traders previously. In addition to motorcycle riding as a profession, majority of the respondents (65.0%) had other jobs.

Table 1: Respondents' Sociodemographic characteristics

Variable	Frequency	Percent
Age (years)		
Below 20	2	2.5
20-29	20	25.0
30-39	29	36.3
40-49	20	25.0

50 and above	9	11.2
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Marital status

single	16	20.2
Married	59	73.2
separated	1	1.3
Divorced	1	1.3

Educational status

Primary education	36	45.0
Secondary education	38	47.5
Post secondary but not		
University	3	3.7
Others	3	3.8

Former work

Trader	34	42.5
Factory worker	8	10.0
Security worker	13	16.2
Civil servant	7	8.8
Company worker	6	7.5
Unemployed	4	5.0
Others	4	5.0
No response	4	5.0

Other jobs

Yes	52	65.0
No	26	32.5

No response 2 2.5

179

180 Table 2 shows the perception of respondents' on substance abuse. Majority (46.3%) of the
 181 respondents defined substance as the act of taking substances to modify mood. Local gin
 182 mixture was indicated by 40.0% of the respondents as the type of substance they use. A
 183 large proportion of the respondents (70.0%) do not believe that substance use can affect
 184 one's health negatively while over half (57.5%) believe that anyone under the influence of
 185 alcohol can cause accident.

186

187 **Table 2: Perception of commercial motorcyclists on substance use**

Variable	Frequency	Percentage
Substance abuse is:		
Taking of hard drugs	16	20.0
Use of harmful substances	14	17.4
Taking substances to modify mood or perception	37	46.3
No response	13	16.3
Type of substance commonly used		
Cigarette/Tobacco	19	22.6
Alcohol	11	13.8
Local Gin Mixture	32	40.0
No response	13	17.6
Substances affect health negatively		
Yes	13	16.2
No	56	70.0
No response	11	13.8
Substances help people ride motor bikes better		

Yes	30	37.5
No	36	45.0
No response	14	17.5

**Can someone under the influence of alcohol
cause accident**

Yes	46	57.5
No	20	25.0
No response	14	17.5

Is use of substance before starting work is safe

Yes	20	25.0
No	46	57.5
No response	14	17.5

Use of alcohol can cause liver problem

Yes	47	58.8
No	15	18.8
No response	18	22.4

Information on substances consumed by respondents is shown in table 3. More of the respondents (23.8%) have consumed local gin while the least substance consumed by the respondents includes cocaine (1.3%). On the duration of use of substances, 23.8% of the respondents said they have been using substance within 10-20 years while the least reported duration of consuming substance is 2-5 years. Substances use is a big risk to their health and also affects optimum performance in terms of daily revenue generation.

Table 3 Behaviour of respondents' towards substance use

Variable	Frequency	Percentage
Use of substances while working		

Yes	29	36.2
No	44	55.0
No response	7	8.8
Substance used		
Beer	4	5.0
Cocaine	1	1.1
Herbal mixture	4	5.0
Cigarette	8	10.0
Local gin	19	23.8
Indian hemp	3	3.8
Others	1	1.3
No response	40	50.0
Duration of use of substance (years)		
1-2	3	3.8
2-5	1	1.3
5-10	2	2.5
10-20	19	23.8
20 and above	16	20.0
No response	39	48.6

196
197 The various reasons for substance use are presented in table 4. Enhanced visibility (51.3%),
198 aids in forgetting problems (47.5%) and relaxation (45.0%) were some of the reasons
199 highlighted by respondents for substance use during driving. Also, 18.8% of the respondents
200 felt that substance use helps one to forget the nation's economic problems, 42.5% are of the
201 view that, it helps in improving work performance and 40.0% are of the opinion that, it helps
202 them to feel 'high' during moments of reduced emotional state.

203
204

Table 4 Reasons for using substances

Yes

Not Applicable

Total

	Freq	%	Freq	%	N	%
Colleagues use substances	9	11.3	71	88.8	80	100
Use when feeling low	32	40.0	48	60.0	80	100
Loss of job	10	12.5	70	87.5	80	100
Form of relaxation	36	45.0	44	55.0	80	100
Improves work	34	42.5	46	57.5	80	100
Makes one see clearly	41	51.3	39	48.0	80	100
Helps one forget problems	38	47.5	42	52.5	80	100
Helps one forget troubles	28	35.0	52	65.0	80	100
Helps one forget nation's	15	18.8	65	81.3	80	100

economic situation

Incidence of road traffic accident was recorded among (34) 45.9% of the respondent. Out of those who have been involved in an accident, 25 (50.0%) of the respondents said it was a fatal accident. Also, among those who have been involved in an accident, 55.4% said they sustained injuries presented in table 5.

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Table 5 Respondents' involvement in an accident

Variables	Yes	%	No	%	Total	%
Ever been involved in an accident	34	45.9	40	54.1	80	100.0
Had fatal accident	25	50.0	25	50.0	80	100.0
Did you sustain any injury	31	55.4	25	44.6	80	100.0

211

Table 6 shows the association between perception of substance use and age as well as educational status. There was a significant association between age and their perception of substance use at $p=0.5$. Educational status revealed no significant association with perception about substance use at $p=0.545$. It also shows that the Perception and Behavior of motorcyclists' Riders are significantly different at $P= 0.04$.

217

218 **Table 6: Perception of substance abuse and selected demographic variables**

Variable	Perception			X ²	p- value
Age (years)	Low	High	Total		
<20	6	16	22	5.730	0.05
30-39	13	16	29		
40 years and Above	10	19	29		
Total	29	51	80		
Educational status					
Primary education	10	26	36	0.910	0.545
Secondary education and above	19	25	44		
Total	29	51	80		
Behaviour					
Poor	21	31	29	1.518	0.04
Good	8	20	51		
Total	29	51	80		

219
220
221

222 **Discussion of findings**

223 This study assessed the perceived consequences' of substance use on health and safety
224 among commercial motorcyclists in Ibadan North Local Government Area of Oyo State. The
225 major limitation of this study is that sample size was small and self report was used thus
226 findings cannot be generalized beyond the study area. The findings could be used to plan
227 further studies on this subject matter. It is interesting to note that 36.2% of the respondents
228 use substances while working despite the fact they are prone to road traffic accidents as 34
229 (45.9) had been involved in RTA in the past. The respondents were all males and majority,
230 (73.2%) of the riders were married. The male preponderance in this study correlates with
231 other published reports (1,3,4). This is not surprising as the occupation is male dominated
232 and these males are traditionally breadwinners and are likely to be involved in outdoor and
233 risky activities including commercial motorcycling.

234 About 36.0% of the motorcyclists in both groups were between 30-39 years of age.
235 This is similar to findings in another study carried out in Yola, Adamawa State, Northern
236 Nigeria showed that 88% of the motorcyclists in the study were aged between 18 and 30
237 years (3). The age range documented that is found to engage in motorcycle riding shows
238 the age that is economically and actively productive age. Riders of commercial motorcycle in
239 this study were seen to be formerly pre-occupied with trading (42.5%) before reverting to
240 motorcycle riding for commercial purposes. This is indicative, as supported by Owoaje et al,
241 (1), of the declining economy in Nigeria with attendant peak in unemployment and non-
242 availability of jobs which has led to an increase in the use of motorcycles for commercial
243 transportation for economic supplementation.

244 Substances commonly used by these motorcyclists' shows that 40.0% consume
245 local gin mixture. This finding is comparable to that by (10) who stated that 34.8% of
246 motorcyclist were found to consume mainly local herbal mixtures and concoctions that
247 contained a considerable quantity of alcohol. This attitude still shows the level of availability
248 of psychoactive substances, its affordability by consumers and how accessible it is to obtain
249 psychoactive substances in the country especially in the face of high-level awareness of its
250 negative consequences in the health of consumers. Also, this trend reveals the level of
251 addiction to substances. Despite the heavy taxes levied on manufacturers of these
252 substances and subsequent increase in the price of these psychoactive substances,
253 consumers could revert to the consumption of local mixtures which are adjudged to contain
254 alcohol are quite affordable to the average income earner.

255 Although, over half of the respondents are of the opinion that, use of alcohol can
256 cause liver problem (58.8%); the use of substance before starting work is not safe and
257 someone under the influence of substance can cause accident (57.5%), a greater proportion
258 (70.0%) of the respondents disagree that substances negatively affects health. This position
259 reflects a despondent situation. The mingling of motorcyclists' with peers whose ideology of
260 psychoactive consumption is at variance with its consequences could contribute to the
261 observed attitude highlighted by the motorcyclist in relation to psychoactive consumption. In
262 addition, the existence of high level of ignorance about the negative consequences of
263 psychoactive substances consumption reflects motorcyclists' access to inaccurate
264 information being disseminated by various existing media regarding the consequences and
265 outcomes of consuming psychoactive substances.

266 Most media stations in the country involved in dissemination of health concepts such
267 as implications of psychoactive substance consumption may not do so using relevant
268 evidence-based strategies capable of instilling behaviour change and may not be designed
269 to capture and sustain attention of its audience.

The study shows that 36.5% of respondents use local herbal mixture (local gin) which contains alcohol while motorcycling. About 16.3% alluded taking this drink twice daily as it makes them see clearly (51.3%). This situation is comparable to that by (10) were respondents take these substances as energy boosters and (4) reiterated their use of substances as a way of suppressing fatigue and sleep during driving. This picture is rather worsening and it is not surprising that the incidence of motorcycle accidents due to motorcycle riding had been on the increase considering other variables. The reasons given above and the consequent consumption of psycho-active substances fuels the incidence of RTA due to the ability of these substances to impair cognitive function and suppress the ability to identify and avoid settings and situations that can result in Road Traffic Accident (RTA). These reasons for the use of substances while driving reflects the existence of incorrect myths about the effects of psycho-active substance consumption, and the level of importance attached to health by male gender.

Accidents and injuries were the aftermath of the consequences of driving under the influence of psychoactive substances as up to 45.9% has had accidents. This is comparable with that cited by (1,4,9,11). Factors cited by other authors (1,21) that could be responsible for the incidence of RTA could be the existence of bad roads, poor vehicular maintenance, absence of protective equipments, impatience while driving among others. In this study, age was found to be related to the behaviour of motorcyclists towards consequences of substance use. Those who are younger and consume psychoactive substances are more likely to be at risk of RTA than older motor cycle riders. The proportion of motorcyclists who had accidents was significantly higher in the 20-29 and 30-39 age groups according to (1). Respondents who are still younger may still be oblivious of the consequences of driving under the influence of substances. The findings from this study have show that many these motorcyclists indulge in the use of various substances which puts them at various health and transport safety risks. These were also linked with previous studies. It is also important to note that apart from use of substances, other factors that contribute to road traffic accidents should be addressed.

Suggestions for Further Studies

- There is need for further study on this topic using a larger sample size.
- Qualitative studies should be carried out to find out why some motorcyclists still indulge in the habit of indulging in taking various substances while being aware of some of the negative consequences.

Implications of Findings/ Recommendations

306 Health workers should use every opportunity to educate the populace on the consequences
307 of substance especially during driving or operation of machinery. More effort should be made
308 to ensure that factors contributing use of these substances are addressed in order to
309 improve safety and health of the populace. Those identified with the habits should be
310 counseled individually. Peer education process can be put in place to further improve the
311 awareness of negative consequences of substance use especially during work. The leaders
312 should be encouraged to be role models to the younger ones.

313 To achieve all these we recommend the following:

- 314 1. Government should enforce policy that prohibits the use of substances while riding
315 motorcycle or driving.
- 316 2. Use of psychoactive substances should be banned in public places like motor parks,
317 market places and in public assembly.
- 318 3. Health works act as public advocates in order to address some identified problems
319 through public mediums.
- 320 4. Information on substance use consequences should be disseminated in Local
321 languages.
- 322 5. Traditional and religious leaders should be encouraged to educate members of their
323 community on the need to avoid substance use and also proffer disciplinary
324 measures for offenders.
- 325 6. Leaders of the Motorcyclists' association should be trained to educate others and be
326 empowered to identify and sanction offenders.
- 327 7. Government should fund multi-zonal study on this topic and also explore reasons for
328 various behaviors in order to find lasting solutions.

329

330 4. CONCLUSION

331

332 Consumption of substances before driving has the ability to impair cognitive
333 functions of the motorcycle driver and reduces his sense of judgment. It affects their
334 perception and interpretation of bad driving. This consequently could lead to the occurrence
335 of RTA as seen in this study. The various factors that contribute to substance use and
336 consequent accidents need to be addressed by Government. It is equally important to
337 intervene in the psychosocial and economic problems being faced by the motorcycle riders
338 as many entered into the business out of frustration of unemployment. Urgent sustained
339 educational intervention would deem appropriate to reduce substance use while riding or
340 driving in order prevent the occurrence of RTA and improve the quality of life of motorcycle
341 riders. More so, there will be need to replicate this study in other locations.

342

343 **COMPETING INTERESTS**

344 We have no competing Interest

345

346 **CONSENT**

347 The authors declare that informed consent was obtained from the participants before data
348 collection. This was part of the instrument for data collection.

349

350 **ETHICAL APPROVAL**

351

352 This survey was not hospital based. It was questionnaire based study. Approval for the study
353 was sought and obtained from the leadership of motorcyclists' association in Ibadan North
354 Local Government Area Oyo state, Nigeria. The study was explained to the respondents and
355 informed consent from the individual motorcyclists was obtained before the administration of
356 the questionnaires

357

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