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## Risk Factors of Substance Use among Commercial Motorcycle Riders in Nsukka Local Government Area, Enugu State, Nigeria

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### Abstract

The study assessed risk factors of substance use among commercial motorcycle riders in Nsukka Local Government Area (LGA), Enugu State. A cross-sectional survey was conducted between January and April, 2023 at various designated units of the commercial motorcycle riders in Nsukka LGA. A total number of 600 commercial motorcycle riders participated. Data collection was done using self-developed Risk Factors of Substance Use Questionnaire (RFSUQ), in which part of it was adapted from Drug Use Screening Inventory (revised DUSI-R). Descriptive statistics of frequency, percentage, and chi-square test were used for analyses. The findings revealed that over the counter medications (93.0%), prescription pain killer pills (84.1), alcohol (76.6%), caffeine (65.2%), and smoking tobacco (54.9%) are the most commonly used substances reported by commercial motorcycle riders. Age, education level, and marital status ($p \leq .05$) were significantly associated with the risk factors for substance use among commercial motorcycle riders. However, Enugu State government should strengthen the need for educating motorcycle riders on those factors that influence them to use alcohol and other drugs while riding and educating both motorcycle riders and automobile drivers on the importance of actively sharing the road with one another.

**Keywords:** Risk factors, Substance use, Commercial motorcycle riders

### Introduction

Substance use is an important contributor to the global burden of disease with attendant physical, social, and psychological effects among various groups including commercial motorcycle riders. Riding under the influence of substances is a major public health concern that has a relevant impact on the operators' health and safety, increasing the risk of injuries and traffic accidents, potentially affecting the general public health as well. World Health Organization (WHO, 2018) reported that substance use is among the leading cause of death globally, and more than 275 million people use illicit drugs, accounting for 5.6 per cent of the global population, and 31 million drug users have an addiction.

The global use of substances appears to be high. Substance use appears to cross all lines of race, culture, education, and socio-economic status, leaving no groups untouched by its devastating effects. National Survey on Drug Use and Health (2020) disclosed that the use of substances among adults was high as at 2016 through 2019; specifying that alcohol and other illicit substances use was high among young adults; with 57.1 per cent in 2016, 56.3 per cent in 2017, 55.1 per cent in 2018, and 54.3 per cent in 2019. National Survey on Drug Use and Health (2020) further revealed that the mortality statistics show that illicit substances claim about 200,000 lives a year and about 500 million a year for tobacco. About 269 million people used drugs worldwide in 2018, which is 30 per cent more than the report in 2009, while over 35 million people suffered from drug use disorders in 2020 (United Nations Office on Drugs and Crime, 2020).

Nigeria's report on substance use appears to be high. Nearly 14.4 per cent of the adult population in Nigeria (about 14.3 million people) aged between 15 and 64 years reported a considerable level of use of substances - a rate much higher than the 2016 global annual prevalence of 5.6 per cent among adult population (National Bureau of Statistics [NBS], 2018). In addition, it showed that the highest level of drug use was recorded among people aged 25-39 years, with Cannabis being the most widely used drug followed by opiods. According to Ojo (2019), the 2018 report by United Nations Office on Drugs and Crime in collaboration with the National Bureau of Statistics and Centre for Research and Information on Substance Abuse (CRISA), and funded by the European Union, revealed that Nigeria has 10.6 million users of Cannabis; 4.6 million users of pharmaceutical opioids, 238,000 amphetamine users, and one out of every five users of drugs is already dependent.

The rate of substance use in Enugu State is becoming worrisome and unprecedented. Unaogu et al. (2017) indicated that the primary substances of abuse were Cannabis (81.4%) and alcohol (16.5%), while cocaine and other stimulants were rarely used in Enugu State (1.2%). Dibia et al. (2020) affirmed that the most commonly used and abused substances among rural communities in Enugu State was alcohol, cigarette, and Cannabis.

Facts from different literature have shown that commercial motorcycle riders are influenced to use substances based on certain risk factors. Risk factors for substance use are of two types: modifiable and non-modifiable risk factors. Modifiable risk factors are those that can be controlled or changed, while non-modifiable risk factors are those that cannot be controlled or changed. The risk factors that can be changed or controlled, include: peer pressure, family history or parental influence, media, emotional depression, social pressure, curiosity, desire to achieve success in a competitive environment, experimentation with alcohol or substance, environmental factors, personality traits among others (Diggs et al., 2017; Hartney, 2020; Kristina et al., 2018), and the uncontrollable risk factors, include: age, level of education, marital status among others (Fasoro et al., 2020; Gudaji & Habib, 2016; Maier et al., 2015). However, road mishaps usually occur in the study area when under substance influence, motorcyclists are seen riding commercial motorcycle.

Commercial motorcycle riders need to maintain full cognitive alertness and safe operating practices while riding at all times. Information regarding patterns of substance use is essential in preventing health compromising behaviours among substance users particularly motorcycle riders. The Federal Road Safety Corps and other civil organizations have continued to put up campaigns against substance use before or while driving cars or riding motorcycles. Most commercial motorcycle riders believe that the use of substances, such as alcohol, cigarette, kola nut, marijuana, and other central nervous system stimulants will significantly improve their operation and keep sleep at bay for as long as possible. Commercial motorcycle riders choose substances as a form of performance-enhancing drug, to increase productivity, to keep awake while riding and to augment their strength with substances as an adjustment strategy to stressful jobs, overcome depression, and overcome daily problems and for pleasure. Substance use poses a significant threat to the health, social and economic fabric of families, communities, and nations.

There is virtually no prior published study concerning commercial motorcycle riders with respect to risk factors of substance use in Nsukka Local Government Area, Enugu State. Based on these facts, the study investigated the risk factors of substance use among commercial motorcycle riders in Nsukka Local Government Area, Enugu State. Specifically, the study determined the the risk factors of substance use among commercial motorcycle riders in Nsukka Local Government Area, Enugu State; with respects to socio-demographic factors (age, education level, and marital status). The study findings would inspire Enugu State government

to strengthen on the need for educating motorcycle riders on those factors that influence them to use alcohol and other drugs while riding and educating both motorcycle riders and automobile drivers on the importance of actively sharing the road with one another.

## Material and Methods

### Study design and setting

A cross-sectional survey was conducted between January and April, 2023 at various designated units of the commercial motorcycle riders in Nsukka Local Government Area (LGA), Enugu State. Nsukka LGA shares boundaries with Igboeze South LGA on the North, Kogi State on the North West and West, Udenu LGA on the North East, Isi-Uzo LGA on the East, and Igbo-Etiti LGA on the South. The area was chosen for the study due to the use of commercial motorcycle widely adopted in Nsukka as the fastest means of transportation. The use of substances while riding tends to be 'high' among commercial motorcycle riders in Nsukka, because the commercial motorcycle riders are often seen consuming substances at various places and time leading to reckless riding and the resultant frequent road traffic accident. Most of daily media reports in the area, border on cases of road traffic accidents caused by reckless riding by commercial motorcycle riders, associated with their alarming rate of substance use.

### Participants

The study participants consisted of commercial motorcycle riders in the study area. The population of registered commercial motorcycle riders in Nsukka LGA in the 31 registered units was 4,407 (Motorcycle Transport Union of Nigeria Nsukka Local Government Area Enugu State, 2021). Only commercial motorcycle riders in different units, who had time and expressed their consent in responding to the questionnaires, were included in the study population.

### Sample and Sampling procedures

A sample size of 600 commercial motorcycle riders was used for the study. The sample size was determined using Cohen et al. (2018), which stipulated that when a population size is 2,500 and above at 95 per cent confidence level (5% interval), the sample size should be 333 or above. The simple random sampling and convenience sampling techniques were employed to draw the sample size for the study. The simple random sampling technique of balloting without replacement was used to select 20 out of 31 registered commercial motorcycle units in Nsukka LGA, Enugu State. This was to ensure good representation of the units and participants. The convenience sampling technique was used to select 30 commercial motorcycle riders from each of the 20 drawn registered units, hence 600 commercial motorcycle riders were drawn for the study. Convenience in the sense that commercial motorcycle riders in different units, who had time and expressed their consent in responding to the questionnaires, were used.

### Measures

Data collection was done using a validated self-structured Risk Factors of Substance Use Questionnaire (RFSUQ). The Test Scale consists of two parts: Part I consist of three socio-demographic (age, education level, and marital status). Age was measured as a continuous variable (18-30years, 31-43years, and 44+years). Education level was categorized into four groups (No formal education, primary education, secondary education, and tertiary education). Marital status was grouped into four categories (single, married, and divorced, widowed/separated). Part II consists of 13 (thirteen) questions with dichotomous response options covering on risk factors of substance use. All the questions were close ended. The respondents were requested to place a tick [✓] and encircle on the options as it applies to them

in all the sections. The items in the questionnaire were organized to reflect the purpose of the study as well as the research questions and hypotheses.

The questionnaire's face and content validity were evaluated by a professional board of five experts in health and science education, and it was also tested for internal consistency. To assess the reliability (internal consistency), a trial test was performed on 20 commercial motorcycle riders, and the split half statistics (Spearman's Brown Coefficient) values were calculated, yielding 0.743. The cut-off point for the calculations was 0.70.

**Data collection procedure**
Data collection was conducted between Januray and April, 2023. Six hundred copies of the questionnaire were administered to the commercial motorcycle riders by the researchers with the aid of three research assistants, who were recruited and briefed on the procedure and modalities for administration and retrieval of research instruments prior to the study.

After obtaining permission from the chairmen of the various unit of commercial motorcycle riders Association in Nsukka Local Government Area, for data collection. The researchers explained the objectives of research to the participants and they were reassured that their responses are confidential and no personal identifiers will be disclosed. The questionnaires were administered with the aid of well-trained interviewers. A total number of 600 questionnaires were administered in the process. Only 577 copies were returned which gave a return rate of 96.2 per cent and 23 copies were not returned. Out of the returned copies, 16 were not duly filled out. Only 561 questionnaires duly filled out were used for analyses.

**Data analysis**
The returned questionnaires were properly cross-checked for completeness of responses. The information from duly filled out copies of the questionnaire were coded into the IBM Statistical Package for Social Sciences (SPSS) version 25, and analysed using frequency, percentage, and logistic regression. Percentages were used to answer the research questions.

The criterion for deciding a commonly used substance and risk factor of use of substances was based on WHO (1997) international cut off point of 50 per cent. Therefore, a percentage score that had less than 50 per cent was deemed not reported by the majority or not commonly used, while those that had 50 per cent or above were deemed reported by the majority or commonly used. The null hypothesis was tested using logistic regression. All the tests were 2-tailed, and the probability values less than or equal to 0.05 ($p \leq 0.05$) were considered significant.

**Results**

Table 1: **Responses on Risk Factors of Substances Commonly Used by Commercial Motorcycle Riders (n=561)**

| S/n | Substances Commonly Used | Yes f (%) | No f (%) |
|-----|--------------------------|-----------|----------|
| 1 | Peer pressure | 258 (46.0) | 303 (54.0) |
| 2 | Family history of substance use | 265 (47.2) | 296 (52.8) |
| 3 | Advertising and media (media campaign) | 332 (59.2) | 229 (40.8) |
| 4 | Unemployment | 393 (70.1) | 168 (29.9) |
| 5 | Depression/persistent sad mood. | 401 (71.5) | 160 (28.5) |
| 6 | Desire to achieve success in competitive world. | 184 (32.8) | 377 (67.2) |
| 7 | Social pressure from colleagues | 187 (33.3) | 374 (66.7) |
| 8 | Curiosity/experimental use | 160 (28.5) | 401 (71.5) |
| 9 | Social status, e.g. wealthy/poor | 170 (30.3) | 391 (69.7) |
| 10 | School dropout | 234 (41.7) | 327 (58.3) |
| 11 | Materialistic value system in the society, such as the craze to get rich quick. | 134 (23.9) | 427 (76.1) |
| 12 | A means of escapism in order to avoid one's responsibility. | 212 (37.8) | 349 (62.2) |
| 13 | Nature of employment, e.g. long distance riding/driving | 325 (57.9) | 236 (42.1) |
| | **Overall percentage** | **50.8** | **49.2** |

Table 1 shows that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported by the majority (50.8%). Also, depression/persistent sad mood (71.5%), unemployment (70.1%), advertising and media campaign (59.2%), and nature of employment (57.9%) were the risk factors for substances commonly used by commercial motorcycle riders reported by the majority. Furthermore, the table shows that other risk factors for substances commonly used by commercial motorcycle riders, especially materialistic value system in the society, such as the craze to get rich quick (23.9%) and curiosity/experimental use (28.5%) were not reported by the majority of commercial motorcycle riders.

Table 2: **Responses on Risk Factors of Substances Commonly Used by Commercial Motorcycle Riders Based on Age (n=561)**

| S/n | Substances Used | 18-30years (n = 228) f (%) | 31-43years (n = 173) f (%) | 44 +years (n = 160) f (%) |
|-----|-----------------|----------------------------|----------------------------|---------------------------|
| 1 | Peer pressure | 106 (46.5) | 95 (54.9) | 57 (35.6) |
| 2 | Family history of substance use | 119 (52.2) | 75 (43.4) | 71 (44.4) |
| 3 | Advertising and media (media campaign) | 151 (66.2) | 103 (59.5) | 78 (48.8) |
| 4 | Unemployment | 167 (73.2) | 121 (69.9) | 105 (65.6) |
| 5 | Depression/persistent sad mood. | 170 (74.6) | 130 (75.1) | 101 (63.1) |
| 6 | Desire to achieve success in competitive world. | 80 (35.1) | 66 (38.2) | 38 (23.8) |
| 7 | Social pressure from colleagues | 91 (39.9) | 51 (29.5) | 45 (28.1) |
| 8 | Curiosity/experimental use | 73 (32.0) | 55 (31.8) | 32 (20.0) |
| 9 | Social status, e.g. wealthy/poor | 83 (36.4) | 52 (30.1) | 35 (21.9) |

| 10 | School dropout | 103 (45.2) | 69 (39.9) | 62 (38.8) |
| 11 | Materialistic value system in the society, such as the craze to get rich quick. | 67 (29.4) | 42 (24.3) | 25 (15.6) |
| 12 | A means of escapism in order to avoid one's responsibility. | 102 (44.7) | 69 (39.9) | 41 (25.6) |
| 13 | Nature of employment, e.g. long distance riding/driving | 159 (69.7) | 97 (56.1) | 69 (43.1) |
| | **Overall** | **57.5** | **52.0** | **40.0** |

Table 2 shows that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents aged 18-30 years (57.5%) more than those aged 31-43 years (52.0%) and 44+ years (40.0%) respectively. Also, the table shows that among the enlisted items, majority of commercial motorcycle riders irrespective of their age group, reported unemployment and depression/persistent sad mood as risk factors for substance use.

Table 3: **Responses on Risk Factors of Substances Commonly Used by Commercial Motorcycle Riders Based on Education Level (n=561)**

| S/n | Substance Use Risk Factors | NFE (n = 68) f (%) | PE (n = 117) f (%) | SE (n = 237) f (%) | TE (n = 139) f (%) |
|---|---|---|---|---|---|
| 1 | Peer pressure | 35 (51.5) | 64 (54.7) | 94 (39.7) | 65 (46.8) |
| 2 | Family history of substance use | 33 (48.5) | 56 (47.9) | 96 (40.5) | 80 (57.6) |
| 3 | Advertising and media (media campaign) | 52 (76.5) | 78 (66.7) | 119 (50.2) | 83 (59.7) |
| 4 | Unemployment | 50 (73.5) | 86 (73.5) | 164 (69.2) | 93 (66.9) |
| 5 | Depression/persistent sad mood. | 48 (70.6) | 86 (73.5) | 169 (71.3) | 98 (70.5) |
| 6 | Desire to achieve success in competitive world. | 19 (27.9) | 49 (41.9) | 69 (29.1) | 47 (33.8) |
| 7 | Social pressure from colleagues | 23 (33.8) | 47 (40.2) | 79 (33.3) | 38 (27.3) |
| 8 | Curiosity/experimental use | 32 (47.1) | 34 (29.1) | 64 (27.0) | 30 (21.6) |
| 9 | Social status, e.g. wealthy/poor | 27 (39.7) | 39 (33.3) | 71 (30.0) | 33 (23.7) |
| 10 | School dropout | 37 (54.4) | 50 (42.7) | 111 (46.8) | 36 (25.9) |
| 11 | Materialistic value system in the society, such as the craze to get rich quick. | 20 (29.4) | 33 (28.2) | 38 (16.0) | 43 (30.9) |
| 12 | A means of escapism in order to avoid one's responsibility. | 30 (44.1) | 56 (47.9) | 66 (27.8) | 60 (43.2) |
| 13 | Nature of employment, e.g. long distance riding/driving | 49 (72.1) | 84 (71.8) | 103 (43.5) | 89 (64.0) |
| | **Overall percentage** | **64.7** | **61.5** | **40.9** | **51.8** |

Key: NFE = No Formal Education, PE = Primary Education; SE – Secondary Education; TE = Tertiary Education

Table 3 shows that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents with no formal education (64.7%) more than those with primary (61.5%), tertiary (51.8%), and secondary education (40.9%) respectively. Also, the table shows that among the enlisted items, majority of commercial motorcycle riders irrespective of their education level, reported advertising and media (media

campaign), unemployment, and depression/persistent sad mood as risk factors for substance use.

Table 4: **Responses on Risk Factors of Substances Commonly Used by Commercial Motorcycle Riders Based on Marital Status (n=561)**

| S/n | Substances Use Risk Factors | Single (n = 204) f (%) | Married (n = 282) f (%) | Divorced (n = 47) f (%) | Widowed/ Separated (n = 28) f (%) |
|---|---|---|---|---|---|
| 1 | Peer pressure | 101 (49.5) | 118 (41.8) | 32 (68.1) | 7 (25.0) |
| 2 | Family history of substance use | 103 (50.5) | 125 (44.3) | 28 (59.6) | 9 (32.1) |
| 3 | Advertising and media (media campaign) | 137 (67.2) | 152 (53.9) | 26 (55.3) | 17 (60.7) |
| 4 | Unemployment | 154 (75.5) | 194 (68.8) | 34 (72.3) | 11 (39.3) |
| 5 | Depression/persistent sad mood. | 164 (80.4) | 191 (67.7) | 28 (59.6) | 18 (64.3) |
| 6 | Desire to achieve success in competitive world. | 75 (36.8) | 85 (30.1) | 12 (25.5) | 12 (42.9) |
| 7 | Social pressure from colleagues | 80 (39.2) | 84 (29.8) | 10 (21.3) | 13 (46.4) |
| 8 | Curiosity/experimental use | 63 (30.9) | 69 (24.5) | 18 (38.3) | 10 (35.7) |
| 9 | Social status, e.g. wealthy/poor | 68 (33.3) | 75 (26.6) | 17 (36.2) | 10 (35.7) |
| 10 | School dropout | 88 (43.1) | 128 (45.4) | 12 (25.5) | 6 (21.4) |
| 11 | Materialistic value system in the society, such as the craze to get rich quick. | 54 (26.5) | 57 (20.2) | 15 (31.9) | 8 (28.6) |
| 12 | A means of escapism in order to avoid one's responsibility. | 92 (45.1) | 87 (30.9) | 25 (53.2) | 8 (28.6) |
| 13 | Nature of employment, e.g. long distance riding/driving | 140 (68.6) | 141 (50.0) | 30 (63.8) | 14 (50.0) |
| | **Overall percentage** | **54.4** | **48.9** | **57.4** | **32.1** |

Table 4 shows that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents that are divorced (57.4%) more than those single (54.4%), married (48.9%), and widowed/separated (32.1%) respectively. Also, the table shows that among the enlisted items, majority of commercial motorcycle riders irrespective of their marital status, reported advertising and media (media campaign), depression/persistent sad mood, and nature of employment (e.g. long distance riding/driving) as risk factors for substance use.

Table 5: **Logistic Regression of Socio-demographic Factors Associated with the Risk Factors for Substance Use among Commercial Motorcycle Riders ($n = 561$)**

| Factors | B | S.E. | Wald | Df | p | Exp(B) | 95% C.I. for Exp(B) | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Age | | | 13.212 | 2 | .001 | | | |
| 18-30 years[a] | - | - | - | - | - | - | - | - |
| 31-43 years | -.257 | .222 | 1.332 | 1 | .248 | .774 | .500 | 1.196 |
| 44+ years | -.897 | .251 | 12.750 | 1 | .000 | .408* | .249 | .667 |
| Education Level | | | 25.097 | 3 | .000 | | | |
| No Formal Education[b] | - | - | - | - | - | - | - | - |
| Primary Education | -.667 | .359 | 3.458 | 1 | .063 | .513 | .254 | 1.037 |
| Secondary Education | -1.454 | .328 | 19.616 | 1 | .000 | .234* | .123 | .445 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tertiary Education | -1.036 | .345 | 9.015 | 1 | .003 | .355* | .181 | .698 |
| Marital Status | | | 9.605 | 3 | .022 | | | |
| Single[c] | - | - | - | - | - | - | - | - |
| Married | -.231 | .220 | 1.100 | 1 | .294 | 1.259 | .818 | 1.938 |
| Divorced | .451 | .358 | 1.581 | 1 | .209 | 1.569 | .777 | 3.167 |
| Widowed/Separated | -1.166 | .503 | 5.372 | 1 | .020 | .312* | .116 | .835 |
| Constant | 1.280 | .333 | 14.750 | 1 | .000 | 3.595 | | |

**Nagelkerke $R^2$ = .099**
**CI = Confidence Interval**
**Odd Ratio (OR) = Exp(B)**
**Reference Groups: Age[a] = 18-30 years; Education Level = No Formal Education[b] ; Marital Status = Single[c]**
**\*Significant at p≤0.05**

Table 5 shows that the Nagelkerke $R^2$ of .099 indicates a small relationship (variation or change) of 9.9% between the socio-demographic factors and the dependent variable (substance use risk factors). The Wald criterion demonstrated that age, education level, and marital status (p ≤ .05) made a significant contribution to the prediction. Findings show that age, education level, and marital status (p ≤ .05) were statistically significantly associated with the risk factors for substance use among commercial motorcycle riders. In a multivariate analysis, age category 44+ years was 59.2 per cent less likely to be associated with the risk factors for substance use than age category 18-30 years among commercial motorcycle riders (OR = .408, 95% CI [.249-.667], p = .000≤ .05). Attaining secondary education was 76.6 per cent less likely to be associated with the risk factors for substance use than having no formal education among commercial motorcycle riders (OR = .234, 95% CI [.123-.445], p = .000≤ .05). Attaining tertiary education was 64.5 per cent less likely to be associated with the risk factors for substance use than having no formal education among commercial motorcycle riders (OR = .355, 95% CI [.181-.698], p = .003≤ .05). Being widowed/separated was 68.8 per cent less likely to be associated with the risk factors for substance use than being single among commercial motorcycle riders (OR = .312, 95% CI [.116-.835], p = .020≤ .05).

## Discussion

The findings in Table 1 revealed that the risk factors for substances commonly used by commercial motorcycle riders were reported by the majority. The results were expected and therefore, not surprising. This is because studies have found that majority of the commercial motor cycle drivers strongly agreed that the use of substances helped them to relieve stress, increased energy, have alertness for relaxation and sleep after a hard day's work, and for pleasure which helps them work harder for more money in Nigeria (Akande et al., 2023; Egwuatu et al., 2020). The findings were in line with the findings of Adesina et al. (2020) who found that curiosity was cited as the main reason for initiating psychoactive substances. Hence, results that the risk factors for substances commonly used by commercial motorcycle riders were reported by the majority are surprisingly unexpected to be inconsistent. For instance, Makanjuola et al. (2020) found that commercial motorcycle operators in Akure Metropolis engaged in substance use and abuse due to frustrations, to boost energy and get fit for the work, to avoid problems and to think more clearly. The findings may be due to peer pressure, emotional depression, school dropout family history among other factors.

The findings showed that overall, that the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents aged 18-30 years than those aged 31-43 years and 44+ years respectively (Table 2). The findings in Table 5 showed that age was significantly associated with the risk factors for substance use among commercial motorcycle riders. However, age category 44+ years was less likely to be associated with the risk factors for substance use than age category 18-30 years among commercial motorcycle

riders. These results were expected and therefore, not surprising. This is because studies have found that adolescents aged 10-14 years were about three times more likely to engage in psychoactive substances in Nigeria, and the prevalence of alcohol use among adolescents aged 15–19 years was found to be higher in Nigeria and Ethiopia (Adesina et al., 2020; Gebeyehu & Biresaw, 2021). The findings are somewhat in line with the findings of Tindimwebwa et al. (2021) who found that adults aged 18–35 years were over three times more likely to have past-year use of alcohol when compared to those aged 56 years and above in South Africa. However, the reasons for this are multi-factorial and can be seen at the individual, familial, and societal levels. On an individual level, there is cognitive development happening in the young brain, which becomes a critical period that lends itself to particular vulnerability to stressors and risk-taking behaviour (Tindimwebwa et al., 2021). Also, individuals with family problems, such as ongoing conflict, physical or mental illness, and substance abuse are more likely to use substances as a coping mechanism. The findings are not consistent with the findings of Fasoro et al. (2020); Osman (2022); and Mavura et al. (2022) who found in their various studies no significant association between age on the use of substances among commercial operators in Nigeria, Ghana, and Tanzania. Also, the findings may be attributed to the research methods employed by both studies.

The findings revealed that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents with no formal education more than those with primary, tertiary, and secondary education respectively (Table 3). The findings in Table 5 showed that education level was significantly associated with the risk factors for substance use among commercial motorcycle riders. However, attaining secondary education was less likely to be associated with the risk factors for substance use than having no formal education among commercial motorcycle riders. Also, attaining tertiary education was less likely to be associated with the risk factors for substance use than having no formal education among commercial motorcycle riders. The results that the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents with no formal education than the other counterparts was expected and therefore, not surprising given the fact that commercial motorcycle riders with no formal education are not aware of the health implications or the health risk that emanate from the use of substances. The findings are not consistent with the findings of Jatau et al. (2021) who reported that the prevalence of drug abuse was high among secondary school students in Nigeria. The findings are not in agreement with the findings of Durowade et al. (2021) who reported that the highest educational attainment of secondary is known to be a predictor of substance use in Nigeria. Hence, the findings may be attributed to method of data analysis employed by both studies and other environmental factors.

The findings revealed that overall, the risk factors for substances commonly used by commercial motorcycle riders were reported mostly by respondents that are divorced more than those single, married, and widowed/separated respectively (Table 4). The findings in Table 5 showed that marital status was significantly associated with the risk factors for substance use among commercial motorcycle riders. However, being widowed/separated was less likely to be associated with the risk factors for substance use than being single among commercial motorcycle riders. These results were surprising and therefore, expected as one would expect single adults to use substance more than its counterparts. The findings that commercial motorcycle riders who are divorced used substances more than those single, married, and widowed/separated are not surprising and expected, because divorce is a potent risk factor for onset of substance use or drug abuse in Swedish (Edward et al., 2017). The findings are consistent with the findings of Wubet et al. (2020) who reported that parental divorce is among the predictors of lifetime legal substance use in Ethiopia. However, the association with divorce was somewhat stronger than the association of widowhood, suggesting that while the end of a

marriage in general is toxic, divorce is salient (Edward et al., 2017). Hence, the findings that marital status was significantly associated with the risk factors for substance use among commercial motorcycle riders being widowed/separated was less likely to be associated with the risk factors for substance use than being single among commercial motorcycle riders. The findings were not in agreement with the findings of Osman (2022) who reported no association between marital status and age on the use of drug by commercial drivers in Ghana. Also, the findings are in agreement with the findings of Nkporbu et al. (2022) who reported that marital status of people is an essential thing in substance use attitude in Nigeria. It could be attributed to this study due to similarities in purpose of both studies embarked upon, and other social and environmental factors.

**Implications of the Study Findings to Public Health and Education**

The findings that commercial motorcycle riders mostly use substances, such as over the counter medications, pain killer pills, alcohol, caffeine, and smoking tobacco could cause policy makers to formulate suitable and sustainable policies to regulate and intervene on increasing tendencies of substance use, abuse, and addiction by people, particularly commercial motorcyclists. The findings that the risk factors for substances commonly used by commercial motorcycle riders were reported by the majority, could equip parents to be good role model for their children to emulate, and also see the need to educate, monitor, and watch their children against keeping bad friends likely to introduce them into substance use or abuse as they grow up. The findings that age, level of education and marital status were important factors considered in the risk factors of the commonly used substances among commercial motorcycle riders, are expected to notify the public health educators on the need to plan health education targeted at various socio-demographic factors of age, level of education, and marital status, with the aim of modifying substance use tendencies associated with these socio-demographic factors.

## Conclusion

The findings have shown that commercial motorcycle riders mostly used over the counter medications, pain killer pills, alcohol, caffeine, and smoking tobacco. Risk factors for substances commonly used by commercial motorcycle riders were reported by the majority. Finally, age, education, and marital status were very important and strong risk factors for substance use among commercial motorcycle riders in Nsukka LGA, Enugu State. However, Commercial motorcycle riders found under influence of any substance abuse should be given strict and swift punishment, and driver education courses should be made more approachable and taught seriously to assist them behave healthily towards substances commonly used, as they are not only responsible for their own lives but also of their co-passengers and the pedestrians. Enugu State government should strengthen the need for educating motorcycle riders on those factors that influence them to use alcohol and other drugs while riding and educating both motorcycle riders and automobile drivers on the importance of actively sharing the road with one another.

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