SUBSTANCE USE AND PERSONALITY TRAITS AS PREDICTORS OF AGGRESSIVE BEHAVIOR AMONG OKADA RIDERS IN OTUKPO LOCAL GOVERNMENT AREA

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Abstract

This study examined the influence of substance abuse and personality factors on aggressive behaviour among Okada riders in Otukpo Local Government Area with three hypotheses. A quantitative study using a cross-sectional survey design was conducted on 130 participants aged 16–35 years. Data were collected through a self-administered questionnaire using the Aggressive Driving Behavior Scale, Drug Abuse Screening Test, and Big Five Personality Traits Inventory. Statistical analysis was performed using regression analysis. Results revealed that substance abuse significantly influenced aggressive behaviour among Okada riders. Personality factors also had a significant impact on aggressive behavior. Additionally, there was a significant joint influence of substance use and personality factors on aggressive behavior among Okada riders in Otukpo Local Government Area. In conclusion, substance abuse and personality traits play a crucial role in aggressive behaviour among Okada riders. Therefore, the study recommends that the Federal Road Safety Corps and related organizations in Nigeria implement psychological intervention programs and regular enlightenment seminars, particularly targeting individuals with personality traits linked to aggression. These initiatives could help reduce substance use and, in turn, aggressive behaviour among Okada riders. The promotion of behavioural intervention programs, awareness campaigns, and stress management strategies is also recommended to improve their conduct on the road.

Keywords: Substance Abuse, Personality Traits, Aggressive Behaviour, Okada Riders

Introduction

Aggressive behaviours are impulsive, reactionary actions that often result in breaking rules or laws. These behaviours are violent, unpredictable, and can cause physical or emotional harm to others (Verywell Mind, 2023). Aggression can range from verbal abuse to physical assault and may also involve damage to personal property. Recent literature defines aggression as a range of behaviours aimed at causing harm to others, either physically or psychologically, and is often influenced by biological, environmental, and psychological factors (Verywell Mind, 2023).

Aggressive behaviour is also evident in driving, with various forms such as flashing lights, honking, making verbal threats, using offensive gestures, tailgating, blocking other vehicles, and even engaging in extreme acts like ramming motorcycles or physically attacking other drivers (Zhao et al., 2023). A systematic review and meta-analysis conducted by Zhao et al. (2023) found that aggressive driving is significantly associated with faster speeds and more driving errors compared to non-aggressive driving.In defining aggressive driving, it is understood as deliberate actions motivated by impatience, annoyance, hostility, or the desire to save time, which increase the risk of collisions. According to the American Automobile Association Foundation for Traffic Safety (2023), nearly 41,000 people were killed in U.S. traffic crashes, with aggressive driving, speeding, and distractions being major contributors (AAA Foundation, 2023). Aggressive behaviour is defined as actions intended to harm or injure another individual who is motivated to avoid such treatment. This encompasses a range of behaviours, including verbal, mental, emotional, and cyberbullying, and can be influenced by various factors such as biological, environmental, and psychological elements (Verywell Mind, 2023).Studies have indicated that substance use significantly influences aggressive behaviour due to the psychological and physiological effects of drugs and alcohol on the brain. Substances such as alcohol, cocaine, cannabis, and methamphetamine have been found to impair judgment, lower inhibitions, and increase impulsivity, which can lead to heightened aggression (Moeller & Dougherty, 2020). For instance, alcohol intoxication is closely associated with violent acts because it disrupts cognitive control and emotional regulation (Giancola et al., 2021). Similarly, stimulant drugs like cocaine and methamphetamine can increase irritability, paranoia, and aggressive outbursts (Hoaken & Stewart, 2019).Moreover, individuals with chronic substance use disorders may experience withdrawal symptoms, including irritability and aggression, which further reinforce the link between substance use and violent behaviour (DeLisi et al., 2020). These findings suggest that both acute intoxication and long-term substance use contribute to a higher risk of aggressive and violent conduct.

Aggressive behaviour is a symptom associated with various psychiatric disorders across the lifespan. For instance, recent research has highlighted the connection between Attention-Deficit/Hyperactivity Disorder (ADHD) and intimate partner violence. Merscher et al. (2025) found that adults with ADHD are more likely to both perpetrate and experience intimate partner violence, regardless of age or gender. Similarly, emerging studies suggest that adults with ADHD may have a significantly increased risk of developing dementia later in life (Zhang et al., 2023).These findings underscore the broader psychiatric

implications of aggression-related behaviours across the life span.

The definition of aggression remains contested. Many contemporary researchers define aggression as behaviour directed toward another person with the intent to cause harm (American Psychological Association, 2022). Bushman and Huesmann (2021) argue that while aggression may have served adaptive functions among early humans, in modern society, it often manifests as maladaptive and destructive. Ferguson (2020) offers a counterpoint, suggesting that aggression is often instrumental, intended to enhance an individual's dominance relative to others. He further distinguishes between prosocial aggression which may be functional in certain roles such as law enforcement or the military and antisocial aggression, which is harmful and undesirable. Efforts to describe and measure aggressive behaviour continue to present challenges. For example, Coie and Dodge's early concerns about the difficulty of observing intentions and perceptions (reiterated in modern research by Underwood & Paquette, 2021) remain relevant today. The subjective nature of interpreting aggression whether physical or verbal, direct or indirect complicates its study, as these perceptions often depend heavily on cultural and social norms.

Aggression is also expressed in nonphysical forms, such as gossip, social exclusion, and reputational harm. Archer and Coyne (2020) describe all forms of aggression as social strategies that have evolved over time. Olweus's earlier perspectives are echoed in recent work by Heilbron and Prinstein (2021), who argue that nonphysical aggression like spreading rumors or exclusion from social groups can be as psychologically damaging as physical aggression. These covert behaviours are especially common in adolescent and digital contexts, where social media often amplifies the reach and intensity of indirect aggression.

Motorcycles are widely used as a mode of transportation across the world. In advanced economies, they are primarily ridden for pleasure and adventure. However, in Nigeria and several African countries such as Togo, Benin, Burkina Faso, Sierra Leone, and Liberia, motorcycles are commonly used for commercial transportation (Wikipedia, 2023). In Nigeria, commercial motorcycles, popularly called "Okada," became a significant mode of transport in the late 1980s and early 1990s following the economic downturn and the introduction of the Structural Adjustment Program (SAP) (Adepoju & Adebayo, 2022). The economic hardship and rising unemployment led many young people to adopt Okada riding as a means of livelihood. Additionally, the lack of a sustainable public transport system and the poor state of roads further contributed to the rise in commercial motorcycle use. Many Nigerians prefer Okada due to its speed,

ability to navigate heavy traffic, and accessibility to remote areas that larger vehicles cannot reach (Akinyemi, 2021).

Substance use, including alcohol, cigarettes, illegal drugs, prescription medications, inhalants, and solvents, poses a significant risk when combined with driving. The consumption of alcohol and drugs impairs judgment, leading to reckless speeding and violent riding behavior, which significantly increases the likelihood of fatal crashes. Substance use refers to the consumption of alcohol or drugs. Something as common as having a beer with friends during dinner is considered substance use. Substance use may not be a problem or lead to abuse or dependency in some people (Goldstein, 2023). Many people will use substances (e.g., caffeine, prescription medication, alcohol, etc.) over the course of their lifetime without any problems. However, substance use becomes problematic when it starts to have harmful effects on a person's life, such as difficulties at school, at home, or negative impacts on mental and/or physical health (Ogunjimi et al., 2020). All substances can affect the body and the brain, both in the short term and the long term. Some substances have higher risks and more dangerous impacts than others (Miller et al., 2023).

People use substances for a variety of reasons. Some may use substances out of curiosity or because they are influenced by their friends, family, and/or peers. All substances have mood-altering effects, and some can stimulate the brain to "feel good" at least temporarily (Abel et al., 2021). Some people use substances to cope with difficult feelings (e.g., sadness, anxiety, anger, etc.) or when stress becomes more than they know how to handle. If a person uses a substance frequently, it can cause chemical changes in their brain and body, making it difficult to stop using. For example, many drugs make people "feel good" by encouraging the brain to overproduce a naturally occurring chemical called dopamine (National Institute on Drug Abuse, 2023). When dopamine is released, a person may experience feelings of euphoria, happiness, and pleasure. When a person's dopamine level drops (e.g., when they stop using the drug or their body learns to tolerate it), they may not experience those same positive feelings, partly because their brain has lost some of its ability to produce dopamine naturally (Piwana & Haggai, 2021). This means they may want to continue using the drug in order to experience those good feelings again or to mask negative emotions (e.g., sadness, anxiety, anger, etc.) they may be experiencing (Mersy, 2022).

Struggling with substance use can be difficult, and completely stopping use is not easy. Withdrawal refers to the physical and emotional symptoms that a person experiences when they drastically reduce or completely stop using substances. Symptoms of withdrawal can range from mild discomfort (such as a headache) to more

severe reactions like seizures. Some withdrawal effects can be fatal (Pritchard et al., 2022). Addiction is commonly used to describe behavior that is out of control, usually in a harmful way. However, the term addiction can vary by person or culture. When discussing the risks and harms of substance use, it is more appropriate to use terms like "problematic substance use" or "substance use disorder," which describe long-term substance use that causes negative effects (e.g., adverse physical, emotional, and/or social impacts) (Okaza & Aluede, 2023).

One factor likely to predict aggressive behavior among Okada riders is personality traits (Guo, 2025). Personality traits play a crucial role in determining the type and intensity of aggression exhibited by motorcyclists. Research has shown that personality traits are positively associated with aggression under both neutral and provoking conditions (Jiang et al., 2022). Aggression and personality theorists argue that individual personality variables strongly predict aggressive behavior (Tapia et al., 2023). Several traits have been linked to aggression, including narcissism (Guo, 2025) and impulsivity (Jiang et al., 2022).?

Personality can be described as the sum of characteristics that differentiate people. Various taxonomies have been proposed throughout the history of personality research, but in recent decades, there has been growing consensus around the Big Five model. This model describes five broad dimensions of personality: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (Tapia et al., 2023). Neuroticism refers to a tendency to perceive the world as threatening and distressing. Individuals with high neuroticism scores tend to be anxious, vulnerable to stress, depressed, insecure in relationships, moody, and easily frustrated (Guo, 2025). Conscientiousness involves volitional control over behavior and cognition. People who score high on this trait are responsible, attentive, careful, and orderly, with a strong need for achievement and high commitment to work (Tapia et al., 2023). This trait is associated with success in behaviors requiring effort and self-restraint. Conscientiousness has been found to be positively related to academic achievement among youth (Guo, 2025). Agreeableness relates to interpersonal behaviors. Highly agreeable individuals tend to be empathetic, considerate, generous, polite, warm, and harmonious in relationships (Jiang et al., 2022). However, low agreeableness has been identified as a risk factor for chronic depression (Guo, 2025). Interestingly, a combination of high agreeableness and low conscientiousness has been linked to minor depression (Tapia et al., 2023). Openness to experience refers to intellectual curiosity, creativity, and a preference for novelty (Tapia et al., 2023). This trait remains the least understood of the Big Five and is the only one

not mapped onto a temperament substrate (Guo, 2025). Similar to agreeableness, there is limited consistent empirical evidence linking openness to adolescent adjustment outcomes. Some studies have found that openness is significantly and positively related to depression (Jiang et al., 2022), while others suggest the opposite, indicating lower openness among patients with depression (Guo, 2025) or that openness moderates the relationship between neuropsychological functioning and depression (Tapia et al., 2023).

Statement of the Problem

Aggressive behaviour among commercial motorcyclists, popularly known as *Okada* riders, has become a major concern in Otukpo Local Government Area. Reports indicate that Okada riders frequently engage in reckless riding, verbal altercations, road rage, and even physical confrontations with passengers, pedestrians, and other road users. These aggressive tendencies not only threaten public safety but also contribute to frequent road accidents, injuries, and, in extreme cases, fatalities. Studies have identified several factors linked to aggressive behavior among Okada riders. Economic hardship and unemployment have forced many individuals, including those with little or no formal training in road safety, into commercial motorcycling as a means of survival. The daily struggle for passengers and income often leads to impatience, hostility, and high-risk behaviors on the road. Additionally, substance use, particularly alcohol and illicit drugs, has been associated with increased aggression and poor judgment among Okada riders, further exacerbating the problem. Furthermore, riders with high levels of impulsivity and sensation-seeking tendencies are more likely to exhibit aggressive conduct. The consequences of aggressive behaviour among Okada riders in Otukpo are far-reaching. Frequent road accidents result in severe injuries and loss of lives, placing a heavy burden on healthcare facilities and emergency services. Pedestrians and other road users often feel unsafe due to the unpredictable actions of aggressive riders. Additionally, conflicts between Okada riders and law enforcement officers sometimes escalate into violent clashes, leading to further disruptions in public order. Given the increasing prevalence of aggressive behaviour among Okada riders and its negative impact on public safety, there is an urgent need for intervention. Addressing this issue requires a multi-faceted approach, including stricter enforcement of traffic laws, public awareness campaigns on safe riding practices, and psychological interventions to help riders manage stress and aggression. Without adequate measures, the cycle of aggression, accidents, and conflicts will persist, posing a continuous threat to the residents of Otukpo.

Research Questions

Arising from the problem of the study, the following are the research questions:

i. What is the influence of substance abuse on aggressive behaviour among Okada riders in Otukpo Local Government Area?
ii. To what extent do personality traits influence aggressive behaviour among Okada riders in Otukpo Local Government Area?
iii. What is the combined influence of substance abuse and personality traits on aggressive behaviour among Okada riders in Otukpo Local Government Area?

Fauziah et al. (2012) examined the relationship between types of substance used with aggressive behaviour among adolescents. Respondents were 200 adolescents from three juvenile Henry Gurney schools in Malaysia who took part in this exploratory cross-sectional survey research design. A set of questionnaire was constructed by the researcher based on the Aggression Questionnaires (AQ) scale. Results showed that the majority of adolescents (95 percent) indicated an aggressive behaviour of moderate to high level. The result of the study also found that adolescents who have been using heroin and morphine drugs showed significant correlation with aggressive behaviour. The findings provided evidence for the significant role of the government to enhance rehabilitation modules for adolescents involved in substance abuse. Education on how to effectively deal with aggressive behavior among adolescents at risk should be emphasized for building positive behaviour among adolescents in order to produce potential young generation in the future. In another study by Seyed (2016) investigated the prevalence of alcohol and substance abuse (ASA) and its relationship with other risky driving behaviors among motorcycle drivers. A total of 414 drivers with a mean and standard deviation (SD) age of years participated in the study. The study employed cross sectional survey design. Data from motorcycle riders were collected using a standard questionnaire in eight major streets at different times of the day. Results indicated that alcohol or substance consumptions two hours before driving was significantly associated with risky driving behaviors such as using mobile phone during driving, poor maneuvering, and driving over the speed limit and reckless driving. It was also associated with carelessness about safety such as driving with technical defects and not wearing a crash helmet. However, this study was focused on substance abuse and aggressive behaviour as is done in the present study but use different population in the study area. This study focused on the relationship between substance use and risky driving behaviours among general motorcycle riders, the present study investigates how substance use influence aggressive behaviour specifically among Okada riders in Otukpo Local Government Area. This study adds value by exploring psychological traits linked to aggression and providing localized

insights relevant to the Nigerian context, which can inform targeted interventions and policy decisions.

Stig et al. (2012) examined the prevalence of alcohol and psychoactive substances in drivers admitted to hospital for treatment of injuries after road traffic accidents with that in drivers in normal traffic, and calculate risk estimates for the substances, and combinations of substances found in both groups. In these methods, injured drivers were recruited in the hospital emergency department and drivers in normal conditions were taken from the hospital catchment area in roadside tests of moving traffic. Substances found in blood samples from injured drivers and oral fluid samples from drivers in moving traffic were compared using equivalent cut off concentrations, and risk estimates were calculated using logistic regression analyses. Results indicated 21.9% of the injured drivers, substances were found most commonly alcohol and stimulants example, cocaine or amphetamines. This compares to 3.2% of drivers in normal traffic where the most commonly found substances were z-hypnotics and benzodiazepines. The greatest increase in risk of being injured was for alcohol combined with any other substance for more than three psychoactive substances and for alcohol alone. Single use of non-alcohol substances was not associated with increased accident risk. This study focused on road safety and injury risk in general traffic, the current study addresses a gap by exploring how substance use influences aggressive behaviour specifically among Okada riders in Otukpo Local Government Area. This focus provides deeper insight into the psychological and social consequences of substance use within a high-risk occupational group.

Pawlowska (2014) examined psychoactive substances use experience, and addiction or risk of addiction among polishes adolescents living in rural and urban areas. The participants consisted of 1860 People (1320 girls and 540 boys) and their average age being 17 years. Results indicated that there was statistically significant differences as regards the prevalence of psycho-active substances use in urban and rural areas and as regards, the intensity of internet addiction symptoms in adolescents from the urban and rural areas, who use and do not use illegal drugs significantly more adolescents living in urban areas as compared to their peers in rural areas use psycho-active substances mainly Marijuana. While the study offers insights into environmental influences on adolescent substance use, it does not address aggressive behaviour or the experiences of adult occupational groups such as Okada riders. The present study fills this gap by focusing on the psychological impact of substance use—specifically aggression—among commercial motorcyclists in a Nigerian context.

In another study by Mustapha and Faisal

(2016) examined relationship between psycho-active substance use and road traffic violations reported frequent accidents among motorcycle operators in Kano, Northwestern Nigeria. A total of three hundred and ninety-four subjects participated in the study. The results showed that motorcycle operators who used psycho-active substances were more likely to violate traffic laws and to have road traffic accidents compared to those who did not use substances. Results also revealed that there were positive correlation between road traffic violations, road traffic accidents and substance use status at 99% confidence interval. However, this study did not address the link between substance use and aggressive behaviour, nor did it specifically focus on Okada riders. The present study fills this gap by exploring how both substance use and personality traits contribute to aggressive behaviour in this occupational group, providing localized psychological insights that are crucial for public safety and targeted interventions.

Bülent and Duygu (2020) evaluated the effect of substance use disorder on aggression in young men with Antisocial Personality Disorder (ASPD). This cross-sectional study included 328 patients diagnosed with ASPD and comorbid substance use disorder, alongside 111 healthy male subjects. Results revealed that aggression scores were significantly higher in patients with ASPD compared to the healthy group, with aggression subscales (except for indirect aggression) showing higher mean scores in the patient group. A positive correlation was found between aggression scores and total API scores in patients with ASPD. Notably, aggression scores were higher when volatile substances were used compared to other substances, and the duration of substance use disorder was positively correlated with increased aggression. The study suggests that substance use disorder should be prioritized in treatment to mitigate aggression in individuals with ASPD, particularly those addicted to volatile substances. Further research is needed to explore the underlying causes of aggression in substance-abusing individuals. Balogun et al. (2010) investigated the influence of personality factors on aggressive behavior among drivers, applying the frustration-aggression hypothesis. The study involved 300 purposively selected private and commercial automobile drivers in Lagos, Nigeria, using a combination of Focus Group Discussions (FGD) and questionnaires. The premise was that the chaotic traffic environment in Lagos would amplify aggressive instincts, particularly among drivers, thus negatively affecting their behavior. The findings revealed that commercial drivers exhibited significantly higher levels of aggressive driving behavior. The study also confirmed that personality factors jointly influence aggressive behavior among drivers. However, this study focused on automobile drivers in Lagos and did not specifically examine Okada riders, leaving a gap in

understanding how personality factors influence aggression in this particular occupational group.

In another study, Ogunmodede et al. (2012) examined factors influencing the high rate of commercial motorcycle accidents in Oyo State, Nigeria. The study involved 450 commercial motorcycle riders, with the same number of valid responses returned for analysis. The findings revealed a significant joint influence of substance use and aggressive behavior on the rate of accidents among the riders. Balogun et al. (2010) investigated the influence of personality factors on aggressive behavior among drivers, based on the frustration-aggression hypothesis. The study included 300 purposively selected private and commercial automobile drivers in Lagos, Nigeria, using a combination of FGD interviews and questionnaires. Given the chaotic traffic environment in Lagos, the study hypothesized that aggressive instincts would be more pronounced among drivers, negatively affecting their behavior. The results indicated that commercial drivers exhibited significantly higher levels of aggressive driving behavior. Additionally, the study found that personality factors jointly influenced aggressive behavior among drivers. While this study focused on private and commercial automobile drivers, it did not examine how personality traits contribute to aggression among Okada riders, thus leaving a gap in understanding how personality factors influence aggressive tendencies in this specific group.

Balogun et al. (2010) investigated the influence of personality factors on aggressive behavior among drivers, based on the frustration-aggression hypothesis, using 300 purposively selected private and commercial automobile drivers in Lagos, Nigeria. The study employed a combination of Focus Group Discussions (FGDs) and questionnaires. Given the chaotic traffic environment in Lagos, the study hypothesized that aggressive instincts would be more pronounced among drivers, negatively affecting their behavior. The results showed that commercial drivers exhibited significantly higher levels of aggressive driving behavior, with personality factors jointly influencing aggressive behavior. However, this study focused on automobile drivers and did not specifically address Okada riders. The current study differs by examining how both substance use and personality traits contribute to aggressive behavior specifically among Okada riders in Otukpo Local Government Area, Nigeria. By targeting this distinct occupational group, the current study adds valuable insights into the local context of commercial motorcycle riders, highlighting the unique combination of substance abuse, personality factors, and aggressive behavior in this specific population.

Research Hypotheses

Based on the identified gaps, the following hypotheses were postulated:

i. There will be a significant influence of Substance abuse on Aggressive Behaviours among Okada riders in Otukpo local Government Area.
ii. There will be a significant influence of Personality Factors on Aggressive Behaviours among Okada riders in Otukpo local Government Area.
iii. There will be a significant joint influence of Substance abuse and Personality Factors on Aggressive Behaviours among Okada riders in Otukpo local Government Area.

Method

Design

This study adopted cross-sectional Survey design to investigate the influence of substance abuse and personality traits on aggressive behaviours among Okada riders in Otukpo local Government Area. This type of design was adopted because the study assessed the respondents across different characteristics and drew relational scientific inferences without any form of manipulations. The independent variables are substance abuse and personality traits while dependent variable is aggressive behaviour.

Sampling

For the purpose of this study, simple random sampling technique was used to select participants, where every Okada rider in Otukpo Local Government had equal chance of being selected to participate in the research. According to Moore (2008), simple random sampling is used when a large number of individuals, subjects or phenomena exist in the sample size a researcher is targeting to study. As such, Simple Random Sampling (SRS) was used to eliminate systematic bias.

Sample Size Determination/Sample Size

To determine the sample size for this study, Krejcie and Morgan (1970) formula for sample size determination was used. While purposive sampling technique was employed to select participants across eight unites of Okada ridersin Otukpo Local Government Area one from each council ward.

Participants

The participants for this study were Okada riders in Otukpo Local Government Area of Benue State. A total of one hundred and twenty-seven (127) Okada riders participated in the study. Out of the one hundred and twenty-seven questionnaires administered, all were returned and found valid. The participants' ages ranged from 16 to 35 years. Regarding their marital status, 77 respondents (60.6%) were single, while 50 respondents (39.4%) were married. In terms of location, 61 respondents (48.0%) were from Adoka-icho unit, 24 respondents (18.9%) were from Adoka-haje unit, 24

respondents (18.9%) were from Entakpa unit, 17 respondents (13.4%) were from Ewulo unit, 24 respondents (18.9%) were from Okete unit, 24 respondents (18.9%) were from Otobi unit, and 24 respondents (18.9%) were from Otukpo town central unit.

Instruments

Aggressive Driving Behaviour Scale: is an11 items Scale designed John M. Houston, Paul B. Harris, and Marcia Norman in (1993). Using the resulting measure, participants rate the frequency with which they have engaged in each of the 11 behaviors over the past six months using a 6-point response scale (1 never, 2 almost never, 3 sometimes, 4 fairly often, 5 very often, 6 always). Aggressive Driving Behavior Scale has a reliability of = .80 overall measure of aggressive driving practices.

The Drug Abuse Screening Test (DAST): This questionnaire was developed by Michigan in 1982 to measure drugs abuse and substance use. It is a 28-item self-report scale that consists of items that parallel those of the Michigan Alcoholism Screening Test (MAST). The DAST has exhibited valid psychometric properties and has been found to be a sensitive screening instrument for substance use. The internal consistency reliability estimate was substantial at .92. Participants respond to items by choosing either YES or NO.

The Big Five Personality Traits Questionnaire: The scale was developed **by** Goldberg (1992) to measure the Big-Five factor markers. It is a 44-item questionnaire measured on the 5- point likert scale format. The validity of the scale is distributed across the five factors makers ranging from: (1) Extraversion, (2) Agreeableness, (3) Conscientiousness, (4) Emotional Stability, and (5) Intellect / Imagination) with (Alpha = .91) as the highest validity.

Procedure

The researcher first obtained a letter of introduction from the Department of Psychology, Benue State University, Makurdi. The letter was presented to the chairman of the BEMOA Association. The researcher then solicited the consent of the participants through the chairman of the BEMOA Otukpo branch, Benue State, before administering the questionnaires. A total of 127 questionnaires, containing four sections, were distributed, retrieved, and found usable. Participants were cautioned not to include any information on the questionnaire that could disclose their identity. They were drawn from different branches in Otukpo Local Government Area, including Adoka-icho (61 copies), Adoka-haje (24 copies), Entakpa (24 copies), Ewulo (17 copies), Okete (24 copies), Otobi (24 copies), and Otukpo Town Central (24 copies). Furthermore, the recovered questionnaires were not sorted based on any demographic variables. This was to ensure that the

responses were treated anonymously and to guarantee the confidentiality of the data.

Data Analysis

The data was analysed using statistical Package for Social Sciences (SPSS version 20). The Simple Linear Regression and Multiple Regression Analyses was used to test the hypotheses at 0.05 alpha level of significance. This analytical method was done using Statistical Packages for Social Sciences (SPSS version 20).

Results

Table 1: Summary of simple linear regression showing the influence of Substance use on Aggressive Behaviours among Okada riders in Otukpo local Government Area

Variable	R	R^2	df	F	β	t	P
Constant	.395	.156	1,126	23.093		9.889	.000
Substance abuse					-.395	-4.806	.000

The result presented in Table 1 revealed that there is a significant influence of substance abuse on Aggressive Behaviours among Okada riders in Government Area Otukpo local [R=.395, R^2=.156, F(1,126)= 23.093, P<.05]. Based on this result, hypothesis one was accepted.

Table 2: Simple Linear Regression Analysis Showing influence of Personality Factors on Aggressive Behaviours among Okada Riders in Otukpo Local Government Area

Variable	R	R^2	df	F	β	t	P
Constant	.549	.301	1,125	53.827		12.404	.000
Personality factors					-.549	-7.337	.000

The result presented in Table 2 revealed that there is a significant influence of Personality Factors on Aggressive Behaviours among Okada riders in Otukpo local Government Area[R=.405, R^2=.164, F(1,125)=23.110, p<.05]. This result indicated that personality traits contributed 54.9% to the variance observed in aggressive behavious of Okada riders. Based on this result, hypothesis two was accepted.

Table 3: Multiple Standard Regression Analysis Showing Joint Influence of Substance Abuse and Personality Traits on Aggressive Behaviours among Okada Riders in Otukpo Local Government Area

Variable	R	R^2	df	F	β	t	P
Constant	.606	.367	2,125	35.98		12.811	.000
Substance Abuse					.477	6.433	.000
Personality factors					.267	3.600	.000

The result presented in Table 3 revealed that, there is a significant joint influence of substance abuse and personality traits on aggressive behaviours among Okada riders in Otukpo local Government Area. [R=.606, R^2=.367, F(2,125)=35.98, p<.05]. This showed that substance abuse and personality traits accounted for 60.6% to the total variance observed in aggressive behaviour of Okada riders. On the independent bases, the result indicated that substance abuse contributed higher on aggressive behaviours (β=477, t=6.433; P<.05), follow by personality traits (β=477, t=6.433; P<.05). Based on this result, hypothesis three was accepted.

Discussion

The discussion of findings was done according to the tested and verified hypotheses. The first hypothesis of the study which states that there will be a significant influence of substance abuse on aggressive behaviour among Okada riders was tested and it was found that there is a significant influence of substance abuse on aggressive behaviours among Okada riders. This means that Okada riders who involve in substance abuse are likely to express aggressive behaviours. This finding is related to the finding of Fauziah et al. (2012) who examined the relationship between types of substance used with aggressive behaviour among adolescents. Respondents were 200 adolescents from three juvenile Henry Gurney schools in Malaysia who took part in this exploratory cross-sectional survey research design and the result showed that the majority of adolescents (95 percent) indicated an aggressive behaviour of moderate to high level. The result of the study also found that adolescents who have been using heroin and morphine drugs showed significant correlation with aggressive behaviour. The findings provided evidence for the significant role of the government to enhance rehabilitation modules for adolescents involved in substance abuse. Education on how to effectively deal with aggressive behavior among adolescents at risk should be emphasized for building positive behaviour among adolescents in order to produce potential young generation in the future. In another literature review by Seyed (2016), also found that alcohol or substance consumptions two hours before driving was significantly associated with risky driving behaviors such as using mobile phone during driving, poor maneuvering, and driving over the speed limit and reckless driving. It was also associated with carelessness about safety such as driving with technical defects and not wearing a crash helmet. However, this study was focused on substance abuse and aggressive behaviour as is done in the present study but use different population in the study area.

The result of this study is consistent with that of Fauziah et al. (2012) who examined the link between substance abuse and aggressive behavior among adolescents in rehabilitation

settings and its association with risky driving behaviors among motorcycle riders, and specifically focused on Okada riders but used a different population, leaving a gap in understanding how substance abuse influences their aggressive behaviour in a local context. The result of this study align with that of Stig et al. (2012) who examined the prevalence of alcohol and psychoactive substances in drivers admitted to hospital for treatment of injuries after road traffic accidents with that in drivers in normal traffic, and calculate risk estimates for the substances, and combinations of substances found in both groups. In these methods, injured drivers were recruited in the hospital emergency department and drivers in normal conditions were taken from the hospital catchment area in roadside tests of moving traffic. Substances found in blood samples from injured drivers and oral fluid samples from drivers in moving traffic were compared using equivalent cut off concentrations, and risk estimates were calculated using logistic regression analyses. Results indicated 21.9% of the injured drivers, substances were found most commonly alcohol and stimulants example, cocaine or amphetamines. This compares to 3.2% of drivers in normal traffic where the most commonly found substances were z-hypnotics and benzodiazepines. The greatest increase in risk of being injured was for alcohol combined with any other substance for more than three psychoactive substances and for alcohol alone. Single use of non-alcohol substances was not associated with increased accident risk. The gap in the literature is that, the study did not focus on the link between substance abuse and aggressive behavior among Okada riders, leaving a gap in understanding how substance use influences aggression in this specific occupational group.

The result of this study support the work by Pawlowska (2014) who examined psychoactive substances use experience, and addiction or risk of addiction among polishes adolescents living in rural and urban areas. The participants consisted of 1860 People (1320 girls and 540 boys) and their average age being 17 years and revealed that there was statistically significant differences as regards the prevalence of psycho-active substances use in urban and rural areas and as regards, the intensity of internet addiction symptoms in adolescents from the urban and rural areas, who use and do not use illegal drugs significantly more adolescents living in urban areas as compared to their peers in rural areas use psycho-active substances mainly Marijuana. While in another study by Mustapha and Faisal (2016) also examined relationship between psycho-active substance use and road traffic violations reported frequent accidents among motorcycle operators in Kano, Northwestern Nigeria. A total of three hundred and ninety-four subjects participated in the study and the findings showed that motorcycle operators who used psycho-active substances were

more likely to violate traffic laws and to have road traffic accidents compared to those who did not use substances. Results also revealed that there were positive correlation between road traffic violations, road traffic accidents and substance use status at 99% confidence interval. The results indicated that there was also significant relationship between specific substance use, road traffic violations and accidents.

Hypothesis two stated that, there will be a significant influence of personality factors on aggressive behaviours among Okada riders in Otukpo local Government Area. This hypothesis was tested using linear regression analysis. It was found from testing this hypothesis that there is a significant influence of substance use on aggressive behaviours among Okada riders in Otukpo local Government Area. Situating the result of this study with other literature reviews in this study, the findings of this study agreed with the work by Balogun et al. (2010) who investigated the influence of personality factors on aggressive behavior among drivers based on the frustration aggression hypothesis Using300 purposively selected private and commercial automobile drivers in Lagos Nigeria and showed that commercial drivers were significantly higher on aggressive driving behaviour. It was also found that personality factors jointly influence aggressive behaviours among drivers. This study focused on personality factors on aggressive behavior among automobile drivers in Lagos, but not specifically on Okada riders. The result of this study further support the findings of Ogunmodede et al. (2012) who examined factors influencing high rate of commercial motorcycle accidents in Oyo State, Nigeria using a total number of four hundred and fifty commercial motorcycle and revealed that there is a significant joint influence of substance use and aggressive behaviour. The result of this study is in collaboration with that of Balogun et al. (2010) who investigated the influence of personality factors on aggressive behaviour among drivers based on the frustration-aggression using 300 and revealed that commercial drivers exhibited significantly higher aggressive driving behavior. It was also found that personality factors jointly influence aggressive behavior among drivers. This study focused on the influence of personality factors on aggressive behavior among private and commercial automobile drivers but did not examine how personality factors contribute to aggression among Okada riders, leaving a gap in understanding how personality traits influence aggressive tendencies in this specific population. The result of this study is in line with the findings of Mokolapo and Dele (2014) who investigated the influence of personality traits on aggressive behavior among adolescents in Nigeria. A total of three hundred (300) participants were used for the study and result revealed that personality traits significantly influence aggressive behavior among university students. Based

on the results obtained, these conclusions were made: personality traits (agreeableness, neuroticism, openness to experience, extraversion, and conscientiousness) had a significant influence on aggressive behavior among adolescents. This study focused on the influence of personality traits on aggressive behavior among adolescents but did not examine how personality traits contribute to aggression among Okada riders, leaving a gap in understanding how personality traits influence aggressive tendencies in this specific population.

Hypothesis three stated that substance abuse and personality traits will have a significant joint influence on aggressive behaviours among Okada riders in Otukpo Local Government Area. This hypothesis was tested with multiple regression analysis and the result indicated that there is a significant influence of substance abuse and personality traits on aggressive behaviours among Okada riders in Otukpo Local Government Area. This means that substance abuse and personality traits together contribute significantly to aggressive behaviors among Okada riders in Otukpo Local Government Area. The multiple regression analysis confirms that these factors are strong predictors of aggression, suggesting that riders who engage in substance abuse and exhibit certain personality traits (such as high neuroticism or extraversion) are more likely to display aggressive behaviour. The result of this study agree with literature review by Bülent and Duygu (2020) who evaluated the effect of substance use disorder on aggression in young men with Antisocial personality disorder (ASPD) using 328 patients who were diagnosed with ASPD with a comorbidity of substance use disorder, along with 111 healthy young male subjects. The total aggression scores of the patients with a diagnosis of ASPD were significantly higher than those of the healthy group, Mean scores of aggression subscale, except for indirect aggression, were higher in patients diagnosed with ASPD. There was a positive correlation between aggression scores and total API scores in patients diagnosed with ASPD. Aggression scores were higher when subjects were using volatile substances compared to other substances. Aggression scores increased with duration of substance use disorder. Further studies are necessary to determine the cause of aggression in individuals who abuse substances.

Conclusion

In a bid to investigate the influence of substance abuse and personality traits on aggressive behaviours among Okada riders in Otukpo Local Government Area, data was collected and tested. Based on the results, it was concluded that:

i. There is a significant influence of substance abuse on aggressive behaviours among Okada riders in Otukpo Local Government Area.
ii. There was a significant influence of personality traits on aggressive

behaviour among Okada riders in Otukpo Local Government Area.

iii. There was a significant joint influence of substance abuse personality traits on aggressive behaviours among Okada riders in Otukpo Local Government Area.

Recommendations

Based on the findings of this study, the following recommendations are made:

i. Government agencies such as National Drug Law Enforcement Agency (NDLEA), Federal Road Safety Corps (FRSC) Nigeria Police Force (NPF) and State Traffic Management Agencies organizations should implement awareness campaigns to educate Okada riders on the dangers of substance use and its link to aggressive behaviour.

ii. Psychological interventions such as Psychoeducation and Awareness Programs and Substance Abuse Prevention and Rehabilitation Programs should be designed to help Okada riders manage personality traits such as neuroticism and extra version, which may contribute to aggressive behavior.

iii. Authorities such as Ministry of Health, Drug-Free NGOs and State and Federal Courts should enforce strict policies to regulate substance use among commercial motorcyclists, ensuring that those found violating such regulations receive proper counseling and rehabilitation.

iv. Regular training programs on emotional intelligence, conflict resolution, and stress management should be introduced to help riders develop healthier coping mechanisms.

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