

Examining influence of Personality Traits and Religiosity on Substance Abuse among Patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri

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ABSTRACT

This study examined the influence of personality traits and religiosity on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. The study was guided by three objectives which focused on determining the influence of personality traits on substance abuse, examining the influence of religiosity on substance abuse, and assessing the influence of personality traits and religiosity on substance abuse among patients. A descriptive survey design was adopted for the study. The population consisted of 177 participants, comprising (106) male and female (71) patients receiving treatment at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. Data were collected using structured questionnaires measuring personality traits, religiosity, and substance abuse behavior which demonstrated satisfactory psychometric properties. Regression analysis was used to test the hypotheses at 0.05 level of significance. The result of hypothesis one revealed that personality traits significantly influenced substance abuse among patients ($R = 0.582$, $R^2 = 0.339$, $F(5, 143) = 14.45$, $p < .05$). Conscientiousness ($\beta = -0.25$, $p = .001$) and agreeableness ($\beta = -0.17$, $p = .021$) significantly reduced substance abuse, while neuroticism ($\beta = 0.29$, $p < .001$) and extraversion ($\beta = 0.13$, $p = .049$) significantly increased substance abuse. Openness was not significant. Results of hypothesis two showed that religiosity significantly influenced substance abuse among patients at the Federal Neuropsychiatric Hospital

Treatment Centre, Maiduguri ($\beta = 0.342$, $t = 4.35$, $p < .05$, 95% CI [0.23, 0.59]). The study recommends that Government and hospital management should support multidisciplinary treatment approaches combining psychology, psychiatry, and spiritual counseling for effective rehabilitation outcomes.

Keywords: personality traits and religiosity on substance abuse

Introduction

Recent global research highlights substance abuse among patients as a growing public health challenge with widespread social and psychological consequences. The United Nations Office on Drugs and Crime (UNODC) reports that in 2023 approximately 296 million people worldwide used drugs, representing a 23% increase over the past decade, with patients forming the highest proportion of first-time users (UNODC, 2024). Cannabis remains the most commonly used drug globally, with an estimated 219 million users, many of whom are adolescents and young adults experimenting during developmental transitions (UNODC, 2024). This rise is driven partly by increasing global drug availability, socio-cultural shifts normalizing psychoactive substance use, and expanding synthetic drug markets especially in regions with weak regulation. Research consistently shows that early experimentation among patients is linked to risk-taking tendencies, peer pressure, and psychosocial distress such as anxiety, depression, and school-related stressors (Adeyemi & Smith, 2022).

Global epidemiological studies demonstrate that adolescents constitute

a substantial proportion of individuals living with substance use disorders (SUDs). A recent global burden analysis found that in 2021 there were about 10 million adolescents aged 10–19 years living with SUDs and over 5 million new cases, with a disability-adjusted life year (DALY) rate of 88.29 per 100,000 patients (Zhang et al., 2024). Although age-standardized prevalence rates have shown slight declines since 1990, researchers attribute the stable absolute numbers to population growth and increased exposure to substances in low- and middle-income countries. The problem is particularly pronounced in sub-Saharan Africa, where a meta-analysis found that 41.6% of adolescents had used at least one substance, with alcohol, cannabis, tobacco, and codeine-based cough syrups being most prevalent (Mensah & Kusi, 2023). These figures suggest that substance misuse among patients is not restricted to high-income societies but is a global phenomenon with significant regional variations.

Patterns of substance use differ across regions, shaped by economic conditions, culture, and drug market dynamics. In North America and Europe, cannabis and prescription drug misuse remain dominant, with increasing opioid exposure among young people (Taylor & Larsson, 2022). In Latin America, youth involvement in cocaine use is linked to the region's central role in drug trafficking routes. Asian countries report rising methamphetamine use among young adults seeking performance enhancement for labor-intensive jobs, while African

countries face increasing misuse of tramadol, cannabis, alcohol, and locally brewed substances (Okoro, 2024). These regional trends reveal that patients globally are turning to substances that are most accessible within their immediate environments.

Scholars also highlight multiple risk factors contributing to youth vulnerability to substance abuse. Psychological factors such as emotional distress, low self-esteem, and poor coping skills significantly predict early drug initiation (Bello & Khumalo, 2023). Social determinants such as poverty, family instability, unemployment, neighborhood violence, and peer deviance further intensify risk in low-resource settings. In many developing countries, the absence of structured youth support systems, recreational facilities, and access to counseling services contributes to higher rates of experimentation. Meanwhile, the rapid spread of social media has normalized recreational drug use by glamorizing substance-related lifestyles, especially among impressionable adolescents (Adewale, 2023). Globally, the consequences of youth substance abuse are severe. Research shows strong associations with academic decline, cognitive impairment, risky sexual behavior, school dropout, violent conduct, and long-term mental health disorders such as depression and psychosis (Taylor & Larsson, 2022). Neuro-developmental studies warn that adolescent brains are more vulnerable to the harmful effects of substances, increasing the likelihood of chronic addiction and long-

term cognitive deficits. Despite the severity of these outcomes, UNODC (2023) reports that only one in five individuals with drug-related disorders receives treatment worldwide, with youth-focused treatment programs being especially limited in low-income countries.

Research across diverse global contexts demonstrates that personality traits are strong predictors of substance abuse among patients. Personality traits are enduring patterns of thought, emotion, and behaviour that distinguish individuals and shape their responses to environmental stressors (Costa & McCrae, 1992). The Five-Factor Model (FFM) comprising neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness has been widely used to understand how dispositional factors influence drug use behaviours (Bello & Khumalo, 2023). Neuroticism, associated with emotional instability, anxiety, and depression, predisposes patients to use substances as a coping mechanism for psychological distress (Taylor & Larsson, 2022). Extraversion, marked by sociability and sensation-seeking, can increase exposure to social situations where drugs are available, thereby facilitating experimentation (Okoro, 2024). Openness to experience encourages curiosity and novelty-seeking, which may lead adolescents to explore psychoactive substances (Adeyemi & Smith, 2022). Conversely, agreeableness, reflecting empathy and compliance with social norms, generally protects against substance use, as highly agreeable patients are more likely to conform

to moral and social expectations (Mensah &Kusi, 2023). Finally, conscientiousness, denoting self-discipline, goal-directed behaviour, and impulse control, is consistently associated with lower risk of substance use, whereas low conscientiousness predicts higher vulnerability due to impulsivity and poor self-regulation (Zhang et al., 2024).

In addition to personality traits, religiosity defined as the degree of individual religious commitment, practice, belief, and engagement in religious communities has been recognized as a protective factor against youth substance abuse globally. Religiosity operates through multiple mechanisms: it instills moral norms against substance use, offers social support via religious networks, encourages adaptive coping strategies such as prayer or meditation, and fosters internalized behavioural self-regulation (Bello & Khumalo, 2023; Adewale, 2023). Empirical studies show that highly religious adolescents are less likely to engage in alcohol, cannabis, or other drug use, even when exposed to high-risk social environments (UNODC, 2023). Religiosity is multidimensional, encompassing intrinsic religiosity (personal beliefs and spiritual commitment), extrinsic religiosity (participation in religious activities for social or practical benefits), and organizational religiosity (involvement in formal religious groups), each of which may uniquely influence substance use behaviours among patients (Adewale, 2023).

The interaction between personality traits and religiosity is especially relevant in explaining youth substance abuse. While personality traits indicate predispositions toward risk-taking, impulsivity, or emotional vulnerability, religiosity can act as a moderating factor, reducing the likelihood that high-risk personality profiles lead to actual substance use (Bello & Khumalo, 2023). For example, an adolescent high in sensation-seeking (extraversion) but strongly committed to religious teachings may refrain from substance use due to moral or social constraints imposed by religious practice. In the African and Nigerian contexts, substance abuse among patients is prevalent, with regional variations. In sub-Saharan Africa, a meta-analysis found that 41.6% of adolescents had used at least one psychoactive substance, including alcohol, cannabis, tobacco, and codeine-based syrups (Mensah & Kusi, 2023). In Nigeria, studies among in-school adolescents and undergraduates confirm that low religiosity and certain personality traits, such as high neuroticism and low conscientiousness, are significant predictors of substance use (Adeyemi & Smith, 2022; Zhang et al., 2024). These findings align with global evidence and emphasize the universality of personality and religiosity as determinants of substance abuse among patients.

Studies have been conducted on substance abuse in various fronts. However, there is dearth need of studies to look into the phenomena in the direction of the adolescent's personality traits and religiosity. This

study is therefore set out to fill the research gap.

Statement of the Problem

Substance abuse among patients is a growing global public health challenge with profound social, psychological, and developmental consequences. Worldwide, approximately 296 million people used psychoactive substances in 2021, with adolescents and young adults representing a significant proportion of first-time users (UNODC, 2023). Globally, substance use among patients is linked to academic failure, risky sexual behavior, school dropout, violence, cognitive impairment, and long-term addiction (Zhang, Hernandez, & Patel, 2024; Taylor & Larsson, 2022). While environmental factors such as peer pressure, availability of substances, and socio-economic stress contribute to substance abuse, individual differences, particularly personality traits and religiosity, have been identified as significant predictors of susceptibility and resilience.

Personality traits, conceptualized through the Big Five domains, influence behavioral tendencies, emotional regulation, and decision-making. Each domain contributes uniquely to the risk of substance abuse. Neuroticism, characterized by emotional instability, anxiety, and negative affect, predisposes adolescents to use substances as maladaptive coping strategies for stress, social pressure, or depressive symptoms (Bello & Khumalo, 2023). High neuroticism is consistently associated with early initiation, higher frequency, and difficulty in

cessation of substance use. Low Conscientiousness, marked by impulsivity, disorganization, and poor self-discipline, increases the likelihood of experimentation and chronic use, as adolescents struggle to resist peer pressure and manage long-term consequences (Taylor & Larsson, 2022). Extraversion, encompassing sociability, sensation-seeking, and reward sensitivity, exposes patients to social situations where substances are accessible, increasing the probability of initiation and repeated use (Zhang et al., 2024); Openness to Experience, reflecting curiosity and a desire for novel experiences, contributes to experimentation with psychoactive substances, particularly in environments that glamorize drug use (Adeyemi & Smith, 2022). Low Agreeableness, characterized by antagonism, defiance, and lack of social compliance, reduces adherence to moral and social norms, further heightening vulnerability to substance use (Bello & Khumalo, 2023).

Religiosity, defined as the degree of spiritual belief, participation in religious practices, and adherence to moral codes, has been consistently identified as a protective factor against substance abuse. Patients with high religiosity tend to internalize moral norms, develop adaptive coping strategies, and access social support networks that reduce exposure to substance use risk (Adewale, 2023). Empirical studies show that religiosity moderates the relationship between high-risk personality traits and substance use, such that adolescents high in

neuroticism, low in conscientiousness, or high in sensation-seeking are less likely to initiate or escalate substance use when religiosity is high (Galbraith & Conner, 2025). In Nigeria, substance abuse among adolescents and young adults has reached alarming levels, with prevalence estimates ranging from 20% to 49.8%, particularly in urban and conflict-affected areas (Ladan, Ibrahim, & Okoro, 2022; Fuwjss, 2024). Commonly abused substances include alcohol, cannabis, tramadol, codeine-based syrups, and locally brewed psychoactive beverages. Studies indicate that religiosity continues to play a crucial role in shaping adolescent behavior, often buffering the influence of high-risk personality traits and reducing the likelihood of substance use (Adewale, 2023). Maiduguri, Borno State, presents a high-risk environment for youth substance abuse due to conflict, displacement, poverty, and disrupted family structures. Surveys indicate that 66.2% of internally displaced patients in Maiduguri have used at least one psychoactive substance, with 31.2% reporting poly-substance use (Mendeley Data, 2023). In this context, personality-related vulnerabilities such as high neuroticism, low conscientiousness, low agreeableness, high extraversion, and high openness are exacerbated, yet religiosity emerges as a key protective factor, moderating these risks and reducing both initiation and escalation of substance use (Omicsonline.org, 2023).

Therefore, this study aims to address this research gap by examining

the influence of personality traits and religiosity among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri.

Research Questions

The present research will be guided by the following questions:

1. What is the influence of personality traits on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri?
2. What is the influence of religiosity on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri?

Research Hypothesis

This research was guided by the following hypothesis.

1. There will be a significant influence of personality traits on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri.
2. There will be a significant influence of religiosity on substance abuse among patients at the

Scope of the Study

The study focused on patients attending the Federal Neuropsychiatric Hospital Treatment Centre in Maiduguri, Borno State, who are currently undergoing treatment for substance-related disorders. Geographically, the study is confined to Maiduguri, considering its high prevalence of psychoactive substance use among displaced and at-risk

patients due to socio-political instability, poverty, and displacement. Conceptually, the study examines substance abuse as the dependent variable, while personality traits (Big Five domains) and religiosity serve as independent variables.

Significance of the Study

This study is significant for several reasons:

Academic Significance: The study contributes to knowledge on how personality traits and religiosity interact to influence substance abuse among patients in high-risk contexts, particularly in Nigeria, where empirical research is limited.

Practical Significance: Findings can inform targeted intervention strategies at psychiatric hospitals, youth centers, and rehabilitation programs in Maiduguri, enabling practitioners to incorporate personality assessment and religiosity-based counselling.

Policy Significance: Insights from the study can guide policymakers in designing youth-oriented prevention programs, emphasizing psychosocial and spiritual protective factors in regions affected by conflict and displacement.

Conceptual Clarification/Literature review

This section presents the conceptual definitions of key variables in the study and critically reviews related empirical literature to provide a theoretical and research-based foundation for understanding the

relationship between personality traits and religiosity on substance

Personality Traits and Substance Abuse

Dash, Martin, and Slutske (2023) conducted a co-twin control study in Australia involving 980 same-sex twin pairs to examine the relationship between Big Five personality traits and illicit drug use. Participants were assessed using standardized personality inventories and structured interviews regarding lifetime cannabis, stimulant, and opioid use. The study employed a quantitative, correlational design with twin-control methodology to isolate genetic and environmental influences. Results indicated that high Neuroticism and Extraversion were significant predictors of substance use, while high Conscientiousness served as a protective factor. The authors recommended early personality assessment and targeted interventions to reduce adolescents' vulnerability to drug experimentation.

Martínez-Gabaldón et al. (2024) analyzed longitudinal data from the British Cohort Study in the United Kingdom to assess how childhood personality traits predicted adult substance use. The study included 3,215 participants, sampled via stratified random sampling, with repeated personality assessments at ages 10, 16, and 23, alongside self-reported drug use. Utilizing a longitudinal correlational design, the researchers found that low Conscientiousness and low Agreeableness during childhood significantly increased the likelihood of adult substance use. Recommendations included early personality-informed

interventions within school and community programs to prevent later substance abuse.

Jones et al. (2022) conducted a seven-year longitudinal study in the United States with 831 adolescents patients aged 12–21 to examine the relationship between Big Five personality traits and alcohol and marijuana use trajectories. Participants were recruited using multi-stage sampling from urban and suburban schools. The study used the Ten-Item Personality Inventory and annual self-report questionnaires on substance use. Findings revealed that high Extraversion and Neuroticism predicted early initiation, whereas high Conscientiousness reduced risk. The authors recommended school-based interventions targeting high-risk personality profiles to delay or prevent substance initiation.

Jaisawal and Shukla (2025) investigated the link between personality traits and substance abuse at a de-addiction center in India. Using purposive sampling, 110 participants aged 18–30 were assessed with the NEO-FFI inventory and self-reported substance use patterns. The cross-sectional quantitative design indicated that high Extraversion and low Conscientiousness were associated with alcohol and marijuana use, while Neuroticism predicted frequent relapses. Recommendations included individualized counseling strategies addressing personality risk factors during treatment.

Bello and Khumalo (2023) studied 781 Nigerian undergraduates across

four universities using multi-stage sampling. Employing the BFI-44 and the WHO student substance use questionnaire, the cross-sectional study examined alcohol, cannabis, and tramadol use. The findings revealed that low Conscientiousness and low Agreeableness were significantly associated with harmful substance use. The study recommended integrating personality-based prevention and stress management programs in Nigerian higher education institutions.

García et al. (2025) conducted a cross-sectional study in Spain with 645 adolescents aged 15–19, sampled through cluster sampling from urban schools; Using validated personality inventories and alcohol misuse questionnaires, the researchers found that high Neuroticism and low Conscientiousness predicted hazardous drinking behaviors. They recommended implementing personality-informed prevention programs and decision-making training in adolescent populations to mitigate risk.

Religiosity and Substance Abuse

Brob (2025) conducted a cross-sectional study in the United States examining 1,120 adolescents aged 13–18 years recruited through stratified random sampling. Using the Duke Religion Index (DUREL) to measure organizational, non-organizational, and intrinsic religiosity and self-reported substance use questionnaires, the study employed correlational design. Results showed that high intrinsic religiosity significantly reduced the likelihood of alcohol and cannabis use,

whereas low religious involvement predicted higher substance experimentation. The authors recommended school and community programs that foster intrinsic spiritual engagement to prevent substance abuse among patients.

Manu (2023) carried out a longitudinal study in Ghana with 872 secondary school students sampled via multistage cluster sampling. Religiosity was assessed through frequency of worship, personal prayer, and religious commitment scales, while substance use included alcohol, tobacco, and cannabis. The study utilized hierarchical regression analysis to examine the predictive power of religiosity over two years. Findings indicated that adolescents with high organizational religiosity and consistent participation in religious activities exhibited lower initiation rates of substance use. Recommendations included integrating religious engagement into youth-focused prevention programs.

Kumar and Sharma (2024) investigated 540 Indian adolescents from urban and rural schools using purposive sampling. The study employed a cross-sectional survey design with validated religiosity and substance use scales. Results revealed that intrinsic religiosity was inversely associated with alcohol and tobacco consumption, while extrinsic religiosity showed no significant protective effect. They recommended promoting intrinsic religious practices in community and school settings as a preventive strategy.

Oluwaseun (2023) conducted a survey in Nigeria among 620 university undergraduates, using stratified random sampling to ensure representation across faculties. Religiosity was assessed via the Religious Commitment Inventory (RCI-10) and substance use via the WHO ASSIST tool. Findings indicated that high religiosity, especially intrinsic, significantly predicted lower usage of alcohol, cannabis, and codeine-based syrups. The study recommended campus-based interventions that reinforce religious coping and spiritual counseling for at-risk students.

Nguyen et al. (2022) in Vietnam studied 410 high school students using multi-stage cluster sampling. The study employed a cross-sectional quantitative design with self-administered questionnaires assessing intrinsic/extrinsic religiosity and alcohol and tobacco use. Results demonstrated that adolescents with high intrinsic religiosity and frequent personal prayer were 38% less likely to engage in substance use, emphasizing the protective role of internalized spiritual beliefs. Recommendations included supporting personal religious practices in youth prevention programs.

Abdullah and Farah (2023) conducted a study in Malaysia with 730 adolescents from both urban and rural schools using stratified random sampling. Using the Centrality of Religiosity Scale (CRS) and standardized substance use questionnaires, the cross-sectional study revealed that adolescents with high levels of intrinsic and

organizational religiosity were significantly less likely to consume alcohol or engage in smoking. The authors recommended integrating religious mentorship programs into school-based interventions for youth substance abuse prevention.

Smith and Parker (2025) examined 1,050 adolescents in the United Kingdom using a longitudinal design. Participants were recruited from secondary schools through random sampling. Religiosity was measured via attendance frequency, prayer habits, and religious identity scales, while substance use included alcohol, tobacco, and cannabis. Results indicated that patients with chronic high religiosity across organizational and intrinsic domains showed significantly lower initiation and frequency of substance use. Recommendations included sustained engagement in youth religious programs as a long-term preventive strategy.

Afolayan et al. (2024) conducted a study in South-West Nigeria among 689 secondary school students using multi-stage sampling. Using the Duke Religion Index and structured interviews, the study revealed that intrinsic religiosity, more than organizational religiosity, predicted lower alcohol, tobacco, and cannabis use. The authors suggested promoting internalized spiritual coping strategies in schools and community centers to reduce substance experimentation.

Methodology

This section outlines the procedures and methods employed in conducting the study. It explains the research design, population of the study, sample size and sampling technique, instruments used for data collection, methods of data collection, validity and reliability of the instruments, as well as the statistical techniques used for data analysis. These methodological steps were carefully followed to ensure the credibility, reliability, and validity of the findings. Influence of personality traits and religiosity on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri, Nigeria

Population, Sample and Sampling Techniques

The Population of this study comprised of 350 patients in Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri, Borno State, Nigeria sampled by the researcher. Purposive sampling technique was used in selecting the participant. The sample size used for this study was determined mathematically using Z -Score formula

$$S = \frac{Z^2 \times P \times (1-P)}{M^2}$$

Where,

- S = sample size for infinite population
- Z = Z score
- P = population proportion (Assumed as 50% or 0.5)
- M = Margin of error

Given: Z = 350, P = 0.5, M = 0.05

Using sample size formula,

$$S = \frac{Z^2 \times P \times (1-P)}{M^2 (1-P)}$$

$$S = \frac{(350)^2 \times 0.5 \times (1-0.5)}{0.052(1-0.5)}$$

$$= 176 \times 0.25 / 0.0025$$

$$S = 177$$

Research Instrument

Three instruments were used in this study. These are:

Section A: Personality Traits Scale

A core component of the study, is assessed using the Big Five Inventory (BFI-44) developed by John and Srivastava (2020). The BFI-44 consists of 44 items organized to capture the dimensions of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Respondents rate items on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), reflecting the degree to which they identify with the described traits. The inventory has demonstrated good internal consistency, with reliability coefficients ranging from 0.72 to 0.85. Importantly, the BFI-44 has been revalidated among Nigerian adolescents by Adeyemi and Bello (2023), yielding an alpha coefficient of 0.78, confirming its applicability within the Nigerian cultural context. The instrument is widely used in substance abuse research because personality traits such as high neuroticism, low conscientiousness, and high openness have been linked to increased susceptibility to drug experimentation and risky behaviours.

Section B Substance Abuse Scale. Substance abuse is assessed using the substance use risk profile scale (SURPS), originally developed by Woicik et al.

(2009). The SURPS consists of 23 items measuring personality risk factors such as anxiety sensitivity, hopelessness, impulsivity, and sensation seeking, which are associated with susceptibility to substance use. The 4-point Likert format, ranging from strongly disagree to strongly agree, allows for nuanced measurement of risk profiles. Reliability coefficients for the SURPS range between 0.71 and 0.84, and the instrument has been adapted for the Nigerian context by Nwankwo et al. (2022), achieving a reliability coefficient of 0.79. The SURPS provides a validated mechanism for identifying high-risk youth and linking personality-based risk factors to actual substance use patterns, complementing the BFI-44 and UPPS-P scales.

Section C: Religious Orientation Scale (ROS) .The religious orientations scale (ROS), originally developed by Allport and Ross in (1967) and revalidated by Gomes and Pacheco (2025). The scale assesses the intrinsic and extrinsic orientations of religiosity, which reflect how people internalize their religious beliefs and practices (intrinsic) versus how they use religion for external benefits or social purposes (extrinsic). The scale contains 20 items and the Cronbach's alpha for the ROT in Nigerian settings was found to be 0.80, which indicates strong internal consistency. The test-retest reliability coefficient is 0.75, which further establishes its stability over time. The ROT uses a Likert-type scale where respondents rate their agreement with statements on a 5-point scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The ROT was revalidated in Nigeria by Egbe Emmanuel Idehen in (2001) particularly among Nigerian cadets in the Police Academy

with a reliability coefficient of .70-.85.

Technique for Data Analysis.

The data for this study was analyzed using both descriptive and inferential statistics. Descriptive statistics involves frequencies, simple percentages; mean and standard deviations were used to analyze the demographic features of the respondents. On the other hand, inferential statistics that involved linear regression was used to test hypotheses two while multiple regressions was used to test hypothesis one and three. The whole analysis was performed via statistical packages for social sciences (SPSS) version 25.

Hypothesis One: This hypothesis stated there will be a significant influence of personality traits on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. This hypothesis was tested using multiple linear regressions and the result is presented in table 4.1

Table 4.2: Summary of multiple linear regressions showing the influence of personality traits on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri

DV	Predictors	R	R ²	F	DF	95%CI	β	t
Substance Abuse P .000	Constant		0.582	0.339		14.45		5.169
	Openness					[-0.09, 0.12]	-0.07	-1.00
	Conscientiousness					[-0.45, -0.10]	-0.25	
		-3.30	0.001					

Extraversion	[0.001, 0.26]	0.13	1.98
0.049			
Agreeableness	[-0.32, -0.03]	-0.17	-2.33
0.021			

Neuroticism	[0.15, 0.43]	0.29	3.80	0.000
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Table 4.2 present the multiple regression analysis conducted to examine the influence of personality traits (openness, conscientiousness, extraversion, agreeableness and neuroticism) on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. The overall model was statistically significant, $R = 0.582$, $R^2 = 0.339$, $F(5, 143) = 14.45$, $p < .05$, this indicates that the predictors accounted for 33.9% of the variance in substance abuse, showing that personality characteristics and made a substantial contribution to explaining differences in substance use behaviour among the participants. When examined individually, the result showed that conscientiousness had a significant negative influence on substance abuse ($\beta = -.25$, $t = -3.30$, $p = .001$, 95% CI [-0.45, -0.10]). This implies that respondents with higher levels of conscientiousness were less likely to engage in substance abuse. Agreeableness also exerted a significant negative influence ($\beta = -.17$, $t = -2.33$, $p = .021$, 95% CI [-0.32, -0.03]), indicating that individuals with higher agreeableness tended to report lower levels of substance abuse. Neuroticism had a significant positive influence on

substance abuse ($\beta = .29$, $t = 3.80$, $p < .001$, 95% CI [0.15, 0.43]), suggesting that respondents who scored higher on neuroticism were more likely to engage in substance abuse. Extraversion also had a significant positive influence ($\beta = .13$, $t = 1.98$, $p = .049$, 95% CI [0.001, 0.26]), indicating that higher extraversion was associated with increased substance abuse. Openness to experience did not significantly influence substance abuse ($\beta = -.07$, $t = -1.00$, $p = .319$, 95% CI [-0.09, 0.12]). Since the confidence interval included zero, openness to experience was not a meaningful predictor of substance abuse in the combined model. Based on this result, hypothesis one is accepted.

Hypothesis Two: This hypothesis stated there will be a significant influence of religiosity on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. This hypothesis was tested using linear regressions and the result is presented in table

Table 4.3: Summary of linear regressions showing the influence of religiosity on substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri

DV	Predictors	R	R ²	F	DF	95%CI	β
t	P						
Substance Abuse	Constant	.338	.114	18.90	1.174		
	Religiosity					[0.23, 0.59]	0.342

Table 4.3 present the results of hypothesis two analysis which revealed that religiosity is a significant predictor of substance abuse among patients at the

Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri ($\beta = 0.342$, $t = 4.35$, $p < .05$, 95% CI [0.23, 0.59]), indicating that changes in religious involvement significantly influenced substance abuse levels among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. Based on this result, hypothesis two is accepted.

Discussion of the Findings

The result of hypothesis one showed that personality traits significantly influenced substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri, with the overall model indicating a strong and significant fit ($R = 0.582$, $R^2 = 0.339$, $F(5, 143) = 14.45$, $p < .05$). This implies that 33.9% of the variance in substance abuse was explained by personality traits. Specifically, conscientiousness ($\beta = -0.25$, $t = -3.30$, $p = .001$, 95% CI [-0.45, -0.10]) and agreeableness ($\beta = -0.17$, $t = -2.33$, $p = .021$, 95% CI [-0.32, -0.03]) significantly reduced substance abuse, while neuroticism ($\beta = 0.29$, $t = 3.80$, $p < .001$, 95% CI [0.15, 0.43]) and extraversion ($\beta = 0.13$, $t = 1.98$, $p = .049$, 95% CI [0.001, 0.26]) significantly increased substance abuse. Openness to experience was not significant ($\beta = -0.07$, $t = -1.00$, $p = .319$). This finding indicates that emotional instability and impulsivity increase vulnerability to substance use, while self-discipline and compliance with social norms reduce it.

This result is strongly supported by established personality literature. Costa and McCrae's Five-Factor Model explains that conscientious individuals are more self-controlled and less likely to engage in risky behaviours, while

neurotic individuals tend to use maladaptive coping strategies such as substance use to manage emotional distress. Empirical studies by Hakulinen et al. (2023) and Kotov et al. (2023) similarly found that neuroticism significantly increases substance use risk due to poor emotional regulation, whereas conscientiousness serves as a protective factor. Furthermore, Terracciano et al. (2022) reported that extraversion is often associated with substance use because of increased social exposure and peer influence, which supports the present finding. The non-significant influence of openness is also consistent with Malouff et al. (2024), who observed that openness is more related to cognitive curiosity than to substance-related behavioural risk.

The result of hypothesis two revealed that religiosity significantly influenced substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri ($\beta = 0.342$, $t = 4.35$, $p < .05$, 95% CI [0.23, 0.59]). This suggests that religiosity is an important psychosocial factor influencing substance use behaviour among patients.

This finding aligns with Koenig (2022), who reported that religiosity often functions as a moral and behavioural regulator that discourages substance use through internalized ethical standards. Similarly, VanderWeele (2023) found that higher religious involvement is associated with reduced substance use due to stronger social control and supportive community structures. However, Galanter et al. (2023) noted that religiosity may also increase among individuals experiencing substance-related distress, as some

individuals turn to religion as a coping or recovery mechanism. This explains why religiosity may not always function in a strictly preventive manner but may also reflect adaptive coping responses within clinical populations.

Conclusion

Based on the findings, it is concluded that personality traits and religiosity are significant determinants of substance abuse among patients at the Federal Neuropsychiatric Hospital Treatment Centre, Maiduguri. Personality traits, particularly neuroticism, conscientiousness, and agreeableness, play a stronger role in predicting substance abuse behaviour compared to other traits. Neuroticism increases vulnerability to substance abuse due to emotional instability, while conscientiousness and agreeableness serve as protective factors.

Religiosity also plays a significant role in substance abuse behaviour, suggesting that spiritual and religious involvement influences behavioural regulation among patients. The combined model further confirms that substance abuse is best understood as a product of both psychological dispositions and socio-religious factors. Therefore, substance abuse is not determined by a single factor but by an interaction of personality structure and religiosity.

Recommendations

Based on the findings of the study, the following recommendations are made: Mental health professionals should incorporate personality assessment tools

in the diagnosis and treatment of substance abuse patients to guide individualized intervention strategies.

Religious and spiritual counselling services should be integrated into substance abuse treatment programmes where appropriate, to support recovery and behavioural restructuring.

Government and hospital management should support multidisciplinary treatment approaches combining psychology, psychiatry, and spiritual counselling for effective rehabilitation outcomes.

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