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Psychosocial Factors and Drugs Abuse Among Female Undergraduate in Tertiary Institutions in the Federal Capital Territory Nigeria

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ABSTRACT

Substance use among undergraduates in Nigerian tertiary institutions remains a significant public health and educational problem, with reported prevalence ranging from 10.1% to 71.9% across campuses despite generally high awareness of its dangers, and with peer processes consistently identified as central to use and normalisation. This study examined the influence of peer influence, self-esteem, academic stress, and family background on substance use among female undergraduates in tertiary institutions in the Federal Capital Territory, Nigeria, with implications for guidance and counselling. A descriptive research design was adopted, and the population comprised all female undergraduates aged 18 to 35, married and unmarried, across tertiary institutions in the FCT. Using Cochran's (1977) formula for infinite population, a sample size of 384 was obtained, inflated by 20% to 460 as suggested by Israel (2013) to account for non-response and straight-lining. A multistage sampling technique was employed: five tertiary institutions, University of Abuja, National Open University, Baze University, Nile University, and Veritas University, were purposively selected from the 42 tertiary institutions in the FCT, a quota of 92 respondents was allocated to each institution, and snowball sampling was used to locate respondents within each location until the quota was met. Data were collected via a structured questionnaire administered through the Drop-Off/Pick-Up (DOPU) method over two weeks, with the assistance of three research assistants, and analysed descriptively using SPSS version 27. The findings revealed that peer influence recorded the highest endorsement among the four factors, with an average of 62.6% of respondents agreeing or strongly agreeing that peer influence contributes to substance use, followed by self-esteem at 57.0%, academic stress at 51.1%, while family background recorded the lowest endorsement at 39.8%, with disagreement and neutral responses collectively outweighing agreement on every item. The study concluded that peer influence and self-esteem are the more pressing psychosocial factors associated with substance use among female undergraduates in the FCT, while academic stress and family background, though contributory, played comparatively smaller roles in this sample. It recommends that counselling units in tertiary institutions prioritise peer-focused interventions and self-esteem-building components, while maintaining stress-management and family-inclusive support for the smaller proportion of students affected by those factors.



KEYWORDS: Peer Influence, Self-Esteem, Academic Stress, Family Background, Substance Use, Female Undergraduates

Introduction

Substance use was described as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs, and it has increasingly been framed as a major public health and educational concern rather than only a moral failing. In reported speech, recent scholars argued that the global significance of substance use lies in its heavy burden on health, disability, and social functioning among adolescents and young adults; Chen et al. (2025) noted that substance use disorders contribute substantially to incidence, prevalence, mortality, and disability among people aged 10–24 years. Zhao et al. (2026) similarly maintained that mental and substance use disorders remain major public health challenges among adolescents and young adults worldwide, with disability burdens that intensified alongside broader mental health pressures. Volkow and Blanco (2023) further explained that substance use disorders exact a large toll on health, well-being, and social functioning because they alter brain systems involved in reward, stress, mood, and self-control. At the African level, Ebrahim et al. (2024) reported that substance use among young people in sub-Saharan Africa has become a major public health concern, with pooled lifetime prevalence of any substance use at 21.0% and alcohol problems the most prevalent. Emmanuel et al. (2024) added that substance use in West Africa is widespread, with pooled prevalence estimates of 44% for alcohol and 30% for tramadol, making it a serious source of morbidity and socioeconomic strain. Jaguga et al. (2024) also stressed that Africa carries a substantial burden of substance use, yet intervention research remains uneven and especially limited for young people and non-alcohol substances. Within Nigeria, Jatau et al. (2021) stated that the burden of drug abuse remains high despite existing laws and policies, with prevalence estimates of 20-40% among students. Oweibia et al. (2025) likewise argued that substance use in Nigeria has reached alarming levels, with pooled prevalence around 14.4% among people aged 15-64 and sharper vulnerabilities in urban youth and women facing stigma and service barriers. Durowade et al. (2021) further showed that among Nigerian undergraduates, substance use is not abstract but immediate, reporting a prevalence of 71.9% in one tertiary institution and identifying curiosity, peer pressure, and school stress as major drivers. Coming down to the Federal Capital Territory, recent Abuja-based evidence suggested that the problem is already visible in educational settings: Gamba et al. (2026) observed that substance use consequences among University of Abuja medical students demand campus-based preventive programmes. Egwuaba and Sunday (2025) reported alarming substance use patterns in FCT communities, especially in Gwagwalada, Bwari, and Kuje, linked to emotional stress, peer pressure, and weak access to care. Giwa (2025) showed among female undergraduates in FCT Abuja that social media usage significantly related to drug abuse while cognitive engagement reduced that tendency.



Furthermore, female undergraduates in tertiary institutions occupy a particularly important position in substance use research because they are navigating early adulthood, academic pressure, gendered expectations, and growing independence at the same time Globally, Akpunne et al. (2020) argued that psychoactive substance use among female undergraduates is a major public health concern because it intersects with broader vulnerabilities such as sexual harassment and campus safety Rahal et al. (2024) added that female youth appear especially responsive to family context, as more frequent family meals were associated with lower substance use among girls Roy et al. (2025) also noted that female college students are often more vulnerable to psychological distress, especially where academic pressure, poor coping, and limited support coexist In Africa, Ebrahim et al. (2024) reported that males still show higher prevalence overall, but female students remain affected by peer, family, and sociocultural influences that shape initiation and continued use Metuge et al. (2022) similarly found in Cameroon that tertiary students had very high substance use exposure, while peers served as the prime source and family co-residence appeared protective Edzamba et al. (2024) added that higher education students in Cameroon reported companionship, thrill-seeking, and curiosity as major motivations, underscoring how student social life can normalize use In Nigeria, Akpunne et al. (2020) found a 73.4% prevalence of psychoactive substance use among female polytechnic undergraduates. Chiejine et al. (2025) offered a more moderate estimate, reporting 4.5% prevalence among female students in their sample, which suggests that prevalence varies widely by setting and measurement Abdullahi and Abdullahi (2023) nonetheless contended that substance use among female undergraduates in Kano was becoming alarming and underreported partly because many affected students avoid counselling for fear of stigma In Northeast Nigeria, Okoro and Lahai (2021) reported that undergraduates in Maiduguri had a past-year prevalence of 14.3%, with male sex and university status predicting use Moddibbo et al. (2025) added from North-East state universities that peer pressure, easy access, depression, and loneliness were key drivers, while counselling centres and peer-led education were urgently needed Nyameh (2023) likewise concluded that substance use in North-Eastern Nigeria is sustained by peer presence, parental neglect, media exposure, and weak parental involvement

FCT specifically, the empirical literature appeared to be growing but still thin, fragmented, and unevenly focused. Giwa (2025) examined female undergraduates across the University of Abuja, FCT College of Education Zuba, and Baze University and found that social media usage had a significant positive relationship with drug abuse, whereas cognitive engagement had a significant negative relationship Gamba et al. (2026) focused on medical students at the University of Abuja and emphasized how sociocultural beliefs, stigma, and poor help-seeking complicate responses to substance-related mental health problems Egwuaba and Sunday (2025), though working with adolescents rather than undergraduates, provided important Abuja context by showing that FCT substance use clusters in rapidly urbanizing zones and is associated with depression, aggression, family neglect, and poor access to mental health services. Osarhiaekhimen et al. (2025) also showed in Abuja that emotional neglect and family dysfunction remain relevant psychosocial predictors in youth substance problems Taken together, these studies suggested that FCT Abuja is



not insulated from the broader Nigerian crisis, but institution-specific evidence on female undergraduates remains sparse.

Recent literature consistently portrayed peer influence as one of the strongest psychosocial drivers of substance use. Watts et al. (2023) found in a meta-analysis that adolescents changed their substance use behaviour in line with peers' actual or perceived use. Aguocha and Nwefoh (2021) reported that peer use predicted undergraduates' own use in Nigeria because the need to belong and be accepted reinforces experimentation. In FCT Abuja, Giwa (2025) implied that digital peer culture intensifies this process by exposing female students to online norms that normalize substance-related behaviour.

Academic stress also emerged as a recurring trigger. Durowade et al. (2021) identified school stress as one of the stated reasons for substance use among Nigerian undergraduates. Okechukwu et al. (2021) similarly found that some undergraduates continued using substances to relieve stress. Roy et al. (2025) argued more broadly that academic pressure, financial stress, and unhealthy coping are central drivers of student psychological distress, especially among female students.

Self-esteem showed a more nuanced relationship. Low self-esteem was repeatedly linked to distress and risky behaviour in student populations. In Nigerian tertiary settings, Adedeji (2024) reported that respondents identified low self-esteem as one of the root causes of drug abuse. Yet Akpunne et al. (2020) found that psychoactive substance use did not significantly predict self-esteem among female undergraduates, which suggests that self-esteem may function more as a background vulnerability than a direct outcome in some settings.

Media influence has become harder to ignore. Agberotimi and Olumuji (2025) found significant associations between exposure to substance-related content on social media and alcohol and cigarette use among Nigerian university students. Ojeniyi et al. (2025) likewise found a significant positive relationship between electronic media use and substance intake among undergraduates in Ibadan. In FCT Abuja, Giwa (2025) brought this issue directly into the present topic by showing that increased social media usage significantly related to higher involvement in drug abuse among female undergraduates.

Family background was one of the most stable predictors across studies. Ajayi and Somefun (2020) found that living with one's mother and receiving adequate family support lowered the likelihood of recreational drug use. Odunbaku et al. (2026) reported that polygamous family structure and parental history of substance use independently increased the odds of substance use disorder among Nigerian undergraduates. Obadeji et al. (2020) similarly found that parental substance use and absence of direct parental care increased substance use risk, while living with parents was protective.

Guidance and Counselling interventions suggested that supportive, school-based, and psychologically informed responses work better than punitive-only approaches. Cadri et al. (2024) identified six core components of school-based substance use prevention in low- and middle-



income countries: education, school environment, school policy, parental involvement, peer engagement, and counselling Jaguga et al. (2024) found that brief interventions in Africa are usually based on motivational interviewing and psychoeducation, are feasible to implement, but show mixed effectiveness and clear evidence gaps for youth-focused work. Verhey et al. (2020) further showed that CBT-based interventions delivered by non-specialists can be acceptable and feasible in low-resource settings Boness et al. (2023) added that CBT has a strong empirical basis for substance use disorders, with small to moderate effects that are strongest at early follow-up In Nigeria, Azumi et al. (2025) reported that psychodynamic therapy significantly reduced substance abuse behaviour among students Adesida et al. (2022) found that many undergraduates themselves believed guidance and counselling would be effective, and they recommended drug-free clubs and continued institutional monitoring Buhari et al. (2024) also showed that campus mental health programmes combining enlightenment, stress management, resilience building, and coping strategies can produce positive feedback and may provide a useful model for tertiary institutions

Several studies have also examined single psychosocial drivers such as peer influence, parenting style, media exposure, or family background. A smaller body of work has focused specifically on female undergraduates, including studies on psychoactive substance use and sexual harassment in Nigeria, female perceptions in Kano, and social media and cognitive engagement in FCT Abuja However, the available FCT studies either focus on general mental health awareness, adolescents in the wider community, or narrow predictors such as social media and cognitive engagement rather than a fuller psychosocial model for female undergraduates What remains insufficiently addressed, therefore, is a study that brings together peer influence, academic stress, self-esteem, media influence, and family background in one integrated analysis focused specifically on female undergraduates in tertiary institutions in the FCT and interpreted through the lens of guidance and counselling needs The clearest research gap is not simply whether substance use exists in the FCT, but which psychosocial factors most strongly shape it among female undergraduates and what that pattern implies for context-sensitive guidance and counselling interventions.

Statement of the Problem

Substance use among undergraduates in tertiary institutions remains a significant public health and educational problem in Nigeria. Nigerian studies consistently show that the burden is already substantial rather than hypothetical, with evidence from multiple campuses confirming persistent use among university students.

Reported prevalence varies widely across settings, which suggests that the problem is widespread but context-sensitive. Chiejine et al. (2025) reported an overall prevalence of 10.1% in two tertiary institutions, Okoro and Lahai (2021) found 14.3% past-12-month use in Maiduguri, Ekekezie et al. (2024) reported 36.7% at the University of Lagos, Wada et al. (2021) found 37.0% in Katsina State, Obi et al. (2024) reported 44.4% lifetime prevalence in Benin, Olanrewaju et al. (2022) found 45.7% across four southwestern universities, Afolabi et al. (2025) reported 61.5% use in Lagos State universities, and Durowade et al. (2021) found 71.9% in Ado-Ekiti.



Knowledge alone does not explain this pattern. High awareness and good knowledge often coexist with continued substance use, as shown by Olanrewaju et al. (2022), Obi et al. (2024), Chiejine et al. (2025), Ekekezie et al. (2024), and Solomon et al. (2024).

Peer influence appears especially prominent. Adesida et al. (2022) found that most users were introduced to substances by friends and that peer pressure was the leading influence, while Ekekezie et al. (2024), Umaru et al. (2025), Obawole (2025), and Achara et al. (2024) also identify peer processes as central to use and normalization.

The substances most often reported are alcohol, tobacco or cigarettes, cannabis or marijuana, tramadol, codeine mixtures, over-the-counter drugs, and energy drinks, although the ranking differs by campus. Olanrewaju et al. (2022), Durowade et al. (2021), Okoro and Lahai (2021), Umaru et al. (2025), Okeke et al. (2022), and Afolabi et al. (2025) all describe this broad pattern.

Literature Review

Conceptual Framework

Substance Use

Substance use among undergraduates refers broadly to the consumption of psychoactive substances that alter mood, cognition, perception, or behavior, whether the substances are legal, illegal, prescribed, or non-prescribed. Ahaneku et al. (2025) define psychoactive drugs as substances that affect mental processes, perception, consciousness, cognition, mood, or emotions. Umaru et al. (2025) describe substance abuse more narrowly as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. McLellan (2017) distinguishes simple substance use from substance misuse and substance use disorders, arguing that use becomes misuse when it creates significant health or social risk, while disorder implies a more severe clinical condition. Saunders and Latt (2020) further differentiate hazardous substance use, harmful substance use, and substance dependence, showing that substance involvement exists on a continuum of severity rather than as a single fixed category. Mahmoud et al. (2017) add an important conceptual caution by noting that older labels such as “substance abuse” and “dependence” can be stigmatizing and that newer frameworks emphasize a continuum of substance use disorder severity.

Within Nigerian undergraduate settings, the substances most often reported are alcohol, cannabis, cigarettes or nicotine, tramadol, codeine-containing syrups, opioids, over-the-counter sedatives, and other prescription or non-prescription psychoactive agents. Olanrewaju et al. (2022) found that alcohol and cigarettes were the most abused substances, while codeine-containing syrups and tramadol ranked above cannabis in their sample. Durowade et al. (2021) similarly identified alcohol and over-the-counter drugs as the most commonly used substances in a southwest Nigerian university. Ahaneku et al. (2025) reported that marijuana and tramadol were the most commonly misused substances among pharmacy and medical students. Osahon and Zekaryah (2023) showed



that codeine and tramadol were the dominant opioids used by undergraduates. Ajayi and Somefun (2020) and Jatau et al. (2021) place these campus patterns within a wider Nigerian context in which cannabis, codeine, cough syrups, amphetamines, heroin, diazepam, and tramadol circulate through peer, pharmacy, patent-medicine, and informal supply channels.

Illicit drug use and prescription medicine misuse overlap but are not identical. Illicit drug use refers to the use of substances prohibited by law or used outside legal control, such as cannabis in the Nigerian context. Prescription medicine misuse refers to the non-medical, excessive, or recreational use of medicines originally intended for treatment, especially opioids such as tramadol and codeine. Akande-Sholabi et al. (2019) operationalized misuse of codeine-containing products as use for non-medical or recreational purpose among university students. Boun et al. (2024) and Adegoke et al. (2025) both describe tramadol misuse in Africa and Nigeria as nonmedical opioid use with substantial dependence risk.

The consequences of substance use are multidimensional. Physically, opioid use is associated with drowsiness, nausea, constipation, numbness, overdose, withdrawal, and fatal interactions, while tramadol misuse has been linked to seizures, convulsions, and death (Ademikanra et al., 2023; Dumbili, 2020). Psychologically, studies link student substance use to anxiety, depression, hallucinations, suicidal ideation, impaired judgment, and cognitive decline (Hanafi, 2025; Umaru et al., 2025; Dumbili, 2020). Socially and behaviorally, substance use is associated with aggression, violence, strained relationships, risky sexual behavior, isolation, criminal activity, and social withdrawal (Umaru et al., 2025; Dumbili, 2020; Abolaji, 2023; Onigbogi et al., 2023). Academically, it is consistently linked to poor grades, absenteeism, missed lectures, failed examinations, dropout risk, and reduced academic engagement (Osahon & Zekaryah, 2023; Umaru et al., 2025; Ahmed et al., 2025).

Substance Use among Female Undergraduates

Drug abuse among female undergraduates is no longer peripheral in the literature. Akpunne et al. (2020) reported a striking psychoactive substance use prevalence of 73.4% among female Nigerian polytechnic undergraduates. Abdullahi and Abdullahi (2023) likewise argue that female involvement in drug abuse is increasing and now constitutes a serious concern in Nigerian universities. Durowade et al. (2021) found an unexpected institution-specific pattern in which female sex predicted substance use in their sample, showing that gender associations vary by campus context rather than always favoring males. By contrast, (Aguocha et al., 2020; Ajayi and Somefun, 2020; Kumolalo et al., 2023) found that males generally used substances more than females, especially for recreational or frequent use.

Gender differences appear clearer in motives and vulnerabilities than in simple prevalence. Aguocha et al. (2020) found that more females initiated use out of curiosity and family modeling, whereas males more often reported peer acceptance, enjoyment, boldness, and stress coping. Ugwu (2023) showed that among Nigerian university students, peer pressure often triggered tramadol



initiation, but cannabis stigma itself partly pushed both genders toward tramadol as a less visibly sanctioned substitute. Akpunne et al. (2020) add that psychoactive substance use among female undergraduates significantly predicted exposure to sexual harassment, underscoring that female consequences can be gendered and safety-related. Nelson (2021) similarly shows that women's cannabis use is shaped by intersecting stigmas, sexual relationships, structural inequities, and coping with gender-based discrimination.

Help-seeking among female students remains constrained by stigma. Abdullahi and Abdullahi (2023) report that female drug users often avoid university counsellors because they fear exposure and judgment. Oweibia et al. (2025) synthesize broader Nigerian evidence showing that women face unique stigma in a patriarchal setting, including fears of being labelled morally deviant. Internationally, Shabbir et al. (2026) describe parallel barriers among female university students in Pakistan, where social stigma, family honor, and reputational fears suppress formal help-seeking. Sub-Saharan African evidence on student help-seeking after gender-based violence also shows that informal help is far more common than formal support, and Nigerian students appear less likely than some peers in Ghana and Rwanda to seek formal assistance.

Peer influence Stress Pathways

Peer influence is one of the strongest and most replicated predictors of student substance use. Adesida et al. (2022) found that 78% of users were introduced to substances by friends and that peer pressure was the leading influence. Durowade et al. (2021), Moddibbo et al. (2025), Ahmed et al. (2025), and Badewo and Titiloye (2023) all identify peer influence as a major predictor of general substance use, opioid misuse, or current student drug use in Nigerian settings. Watts et al. (2023) provide stronger longitudinal evidence, showing a significant peer influence effect on adolescent substance use overall, with behavior changing in the direction of peers' actual or perceived use. Henneberger et al. (2020) refine this by distinguishing peer selection from peer socialization, showing that adolescents both choose substance-using peers and are shaped by them over time.

Peer processes work through modelling, conformity, perceived norms, and the search for social acceptance. Laursen and Veenstra (2021) argue that peer influence functions partly to increase similarity and reduce exclusion during adolescence. Letina et al. (2024) show that substance use clusters within peer groups, and group structure itself matters. Hofer et al. (2024) extend this to the university transition, where perceived peer behavior predicts later alcohol and drug-related self-damaging behaviors, especially when students feel socially disconnected. In African qualitative work (Aaron et al., 2025; Netshakhuma et al., 2026) show that students often use substances to gain acceptance, social belonging, and status within peer hierarchies.

Academic Stress and Substance Use

Academic stress refers to the strain produced when academic demands exceed a student's perceived coping resources. Blows and Isaacs (2022) define student stress as an interaction



between environmental demands and coping capacity. Joseph et al. (2020) described academic stress as a common mental state in training marked by worry about future outcomes, performance demands, and weak coping. Pérez-Jorge et al. (2025) identified homework overload, assessment pressure, and difficulty balancing academic and personal life as major stressors. Nigerian and comparative evidence repeatedly identifies examination pressure, workload, competition, financial strain, and adjustment difficulties as stressors that can promote maladaptive coping.

The link between academic stress and substance use is moderate but consistent when coping is maladaptive. Böke et al. (2019) found that higher stress is associated with unhealthy coping, including substance use coping. Metzger et al. (2017) showed that maladaptive coping mediates the relationship between academic stress and alcohol use. Hiremath et al. (2021) reported significant associations between academic-related stress and tobacco, alcohol, cannabis, inhalant, and sedative use. In Ghana, Lasong et al. (2024) found that improving academic performance was the primary reason for initiating tramadol use. Ugwu (2023) also reports academic pressure as a major reason for tramadol use among Nigerian university students.

Self-Esteem, Family, and Integration

Self-esteem is the evaluative aspect of the self, referring to a person's sense of worth or value, whereas self-concept is broader and includes beliefs and perceptions about who one is. Commodari et al. (2026) separate self-esteem from self-concept clarity and show that self-esteem sits at the center of a wider psychological network of student well-being. Fuentes et al. (2020) show that substance use is negatively related to academic, family, and physical self-esteem, although simple associations can shift after adjustment for age and sex. Tam et al. (2020) report that self-esteem functions as a protective factor against non-medical use of prescription drugs, with coping mediating that relationship. Nigerian evidence is mixed: Olaoye et al. (2020) found a weak negative correlation between self-esteem and drug use, whereas Kumolalo et al. (2023) and Mus et al. (2021) found no significant direct association in their university samples.

Family Structure and Substance Use

Family structure should be used only when the variable truly concerns intact versus non-intact family arrangements, while family functioning refers to the quality of support, cohesion, communication, monitoring, and conflict in the home. Ajayi et al. (2019) and Ajayi and Somefun (2020) both show that living with parents and receiving adequate family support reduce the odds of alcohol or recreational drug use among Nigerian university students. Family-related protective factors include parental monitoring, disapproval of substance use, support, and household presence. Risk factors include family drug-use history, parental substance use, family dysfunction, emotional neglect, permissive parenting, and poor supervision. Positive parenting and school relationships appear to cascade into broader protection against polysubstance use.



Joint Psychosocial Effect

Taken together, the literature supports an integrated psychosocial framework rather than isolated explanations. Trucco (2020) argues that substance use does not occur in a vacuum but emerges from interacting peer, family, school, and neighborhood influences. Brumback et al. (2021) similarly show that social influence, cognitive factors, emotional regulation, and personality each contribute modestly and developmentally to alcohol and cannabis use. Hu et al. (2022) show that family functioning shapes self-esteem, while peer relationships moderate how self-esteem relates to distress. Emeka et al. (2026) synthesize the same logic for tertiary institutions: peer norms, academic stress, financial insecurity, and reduced self-efficacy operate synergistically, not separately.

Counselling Implications

The guidance and counselling implication is clear: prevention and response must be multi-level, confidential, and gender-sensitive. Wali et al. (2026) found that seminars, orientation programmes, individual counselling, group counselling, peer counselling, awareness campaigns, and referral services are widely used and significantly related to prevention of drug abuse in tertiary institutions. Okondu et al. (2020) show that screening, brief intervention, and referral to treatment can be adapted to university settings, using behavior, appearance, performance, and drug tests for early identification, followed by counselling for moderate risk and rehabilitation referral for severe dependence. Cerolini et al. (2023) show internationally that both face-to-face and web-based university counselling improve student mental health, although help-seeking barriers remain common.

For substance use specifically, interventions should address stress management, self-esteem, family processes, and peer systems together. Akpunne et al. (2020) recommend assertiveness, resilience, and problem-solving training for female students. Isola et al. (2025) and Moddibbo et al. (2025) emphasize peer-led education, addiction recovery support, and strengthened counselling centers. Family counselling also has empirical support, because interventions that improve family communication and monitoring reduce substance use severity. Stigma-free practice is essential, especially for women, because fear of moral judgment and reputational damage suppresses formal help-seeking.

The strongest shift in the literature is from viewing undergraduate substance use as merely an issue of ignorance or indiscipline to understanding it as a psychosocial and gendered phenomenon shaped by peer systems, stress, self-processes, and family environments. The biggest open question is which combination of peer-based, family-informed, stress-focused, and stigma-sensitive counselling strategies works best for specific Nigerian undergraduate populations, especially female students and prescription-opioid users.



Theoretical Framework

2.2.3 Problem Behaviour Theory (Jessor & Jessor, 1977)

Problem Behaviour Theory was propounded by Richard Jessor and Shirley Jessor in 1977, building on Rotter's social learning theory and Merton's concept of anomie, and first developed through their earlier Tri-Ethnic Community Study of alcohol abuse and deviance.

The theory holds that an individual's proneness to problem behaviour, including substance use, results from the interaction of three systems: the personality system, comprising values, expectations, beliefs, and self-regard; the perceived-environment system, comprising the models, controls, and support an individual perceives from parents and peers; and the behaviour system, comprising problem and conventional behaviour patterns that work in opposition to one another. Within each system, variables are classified as either instigations, which raise the likelihood of problem behaviour, or controls, which reduce it, and an individual's overall proneness reflects the balance between these instigations and controls across all three systems. The theory further holds that problem behaviours covary, such that engagement in one raises the likelihood of engagement in others, a pattern Jessor termed the problem behaviour syndrome.

Shuaibu et al. (2024), studying adolescents in peri-urban communities in Abuja, applied Problem Behaviour Theory directly, collecting data on risk and protective factors of substance use based on the theory and finding a lifetime substance use prevalence of 22.8 per cent, with several theory-derived risk factors independently associated with use. Egwuaba et al. (2025), surveying adolescents across the FCT, framed peer influence, family structure, and household income as risk factors for substance use in a manner consistent with the theory's perceived-environment system, finding all three significantly predictive. Omoregie et al. (2026), studying students in semi-urban secondary schools in southern Nigeria, examined inter- and intrapersonal factors, corresponding to the theory's perceived-environment and personality systems respectively, and found stress, low self-esteem, and peer pressure among the strongest predictors of substance use.

Shuaibu et al. (2024) found that only some of the risk factors identified by Problem Behaviour Theory were independently associated with adolescent substance use in their Abuja sample, indicating that the theory's full risk-and-protective-factor model does not hold uniformly in this context. Osarhiaekhimen et al. (2025), examining psychosocial predictors of drug use disorder among adolescents in Abuja, drew on risk-factor concepts consistent with the theory's perceived-environment system, such as emotional neglect and family dysfunction, but did not test the theory's complete three-system structure or its covariation assumption. Egwuaba et al. (2025) similarly identified risk factors for substance use among FCT adolescents without formally measuring the theory's personality system or assessing whether substance use covaried with other problem behaviours as the theory predicts. Taken together, these studies suggest that Nigerian research has tended to borrow the theory's risk-and-protective-factor vocabulary selectively rather than test its



full explanatory structure, leaving open how completely the theory's assumptions hold within the Nigerian context.

Despite this limitation, the theory's risk-and-protective-factor logic continues to provide a meaningful account of substance use in Nigerian settings. Shuaibu et al. (2024) found that theory-derived risk factors accounted for a substantial share of the variation in adolescent substance use in Abuja's peri-urban communities. Omoregie et al. (2026) found that the personality- and perceived-environment-consistent factors they examined, including stress, self-esteem, and peer pressure, significantly predicted substance use among Nigerian students. Ajayi et al. (2020) found that family support and co-residence with a parent, both protective factors within the theory's perceived-environment system, significantly reduced the likelihood of substance use among Nigerian university students. This continued explanatory value justifies retaining the theory as the framework for the present study.

Justification for the Adoption of Problem Behaviour Theory

Problem Behaviour Theory is adopted as the theoretical framework for this study. While Social Learning Theory remains the most commonly applied framework in Nigerian research on substance use, its explanatory mechanism is confined to observation, modelling, and reinforcement, and it does not adequately account for internal psychological states such as academic stress and self-esteem, both of which are central variables in this study. Problem Behaviour Theory is adopted because its two-system structure accommodates all four variables under investigation without requiring either system to be stretched beyond its original scope.

Peer influence and family background are located within the theory's perceived-environment system. Peer influence functions as a proximal risk factor within this system, since it directly implicates the specific behaviour under study through peer models and peer approval of substance use, consistent with Omoregie et al.'s (2026) finding that peer pressure was endorsed by 62 per cent of substance users in their Nigerian sample. Family background functions as a distal factor within the same system, capable of operating as either risk or protection depending on its quality: dysfunction and neglect raise proneness to substance use, as Osarhiaekhimen et al. (2025) found among adolescents in Abuja, while support and cohesion lower it, as Ajayi et al. (2020) found among Nigerian university students who lived with their mothers and reported strong family support.

Academic stress and self-esteem are located within the theory's personality system. The theory treats psychological distress and diminished self-regard as instigations that raise an individual's overall proneness to problem behaviour when environmental controls are weak. This placement is consistent with Omoregie et al.'s (2026) finding that stress and low self-esteem were among the strongest predictors of substance use in their Nigerian sample.

By locating peer influence and family background in the perceived-environment system and academic stress and self-esteem in the personality system, Problem Behaviour Theory provides a



single coherent framework within which the combined and independent effects of all four variables on substance use among female undergraduates in tertiary institutions in the Federal Capital Territory can be examined, and is accordingly adopted as the theoretical basis for this study.

Empirical Review

Peer influence and Substance Use

Ahmed et al. (2025) examined how peer influence affects drug use and academic performance among health-training students in northern Adamawa State, Nigeria. Using a descriptive cross-sectional design, they surveyed 430 students selected via multistage sampling (purposive institution selection, stratification by department, proportionate allocation, and systematic random sampling) from three institutions; all 430 questionnaires were distributed and retrieved, with 430 valid responses. Data were analyzed with chi-square tests and multivariate logistic regression in SPSS Version 26. Peer influence emerged as the strongest predictor of drug use (AOR = 2.84; 95% CI: 1.94–4.15; $p < .001$), and drug use, in turn, significantly predicted poor academic performance (AOR = 3.42; 95% CI: 2.09–5.59). The study concluded that peer networks substantially drive substance use, which undermines academic outcomes. Limitations include reliance on self-reported data (risk of recall and social desirability bias), a cross-sectional design that precludes causal inference, and lack of environmental verification of drug sources; additionally, the use of adjusted odds ratios rather than beta coefficients and t-statistics limits direct interpretation of effect size in linear terms.

Umaru et al. (2025) investigated the incidence and determinants of drug abuse among tertiary students in Wukari, with a specific objective of assessing how peer influence shapes initiation and patterns of use. Using a cross-sectional mixed-methods design, they surveyed 500 undergraduates selected via stratified random sampling across three institutions; 500 questionnaires were distributed, 492 were retrieved, and 488 were valid for analysis, complemented by focus groups and key informant interviews. Data were analyzed with chi-square tests and logistic regression in IBM SPSS Statistics version 25, alongside thematic content analysis for qualitative data. Peer influence emerged as the strongest motivator for initiation, with qualitative reports indicating students often start using substances to fit in or gain social acceptance. The authors concluded that peer pressure, alongside academic stress and curiosity, drives substance use and recommended peer-led interventions. Limitations include reliance on self-reported data (risk of social desirability and recall bias), a cross-sectional design that precludes causal inference, potential underreporting among female students due to stigma.

Academic Stress and Substance Use

Hanafi (2025) investigated the psychosocial effects of drug abuse on undergraduates' academic achievement in North-east Nigerian state universities, with a specific objective of determining whether academic stress contributes to drug abuse. Using a descriptive survey design, the study targeted all undergraduates in six tertiary institutions (including Adamawa State, Gombe State,



and Borno State Universities) and purposively selected 900 students; 900 questionnaires were distributed, 882 were retrieved, and 882 were valid for analysis. Data were analyzed with descriptive statistics (mean, SD) and chi-square tests in SPSS at $\alpha = 0.05$. Academic stress was not a significant driver (mean = 2.46, below the 2.50 acceptance threshold), indicating it contributes less to drug abuse than peer pressure and psychological factors; the study did not report a beta coefficient, t-statistic, or p-value for academic stress in a regression model, limiting precise effect-size interpretation. The study concluded that peer pressure, easy access, and psychological challenges are the key drivers, while academic stress and lack of awareness are less influential. Limitations include reliance on self-report (social desirability bias), cross-sectional design (no causality), purposive sampling (limited generalizability).

Omeje et al. (2023) investigated the relationship between academic anxiety and substance use among undergraduate students, with a specific objective of determining whether academic anxiety (as a proxy for academic stress) predicts or relates to substance use. Using a correlational survey design, they sampled 120 undergraduates from Godfrey Okoye University via multi-stage sampling (cluster, simple random, and purposive); 128 questionnaires were distributed, 124 were retrieved, and 120 were valid for analysis. Data were analyzed with Pearson correlation in SPSS version 23. Academic anxiety was positively related to substance use ($r = .317, p < .05$), indicating that higher anxiety associates with greater substance use; however. The authors concluded that academic anxiety contributes to substance use and recommended interventions to reduce academic tension. Limitations include single-institution sampling (limited generalizability), data collection during exam period (potential response bias), cross-sectional correlational design (no causality).

Self-esteem and Substance Abuse

Okurame et al. (2024) examined self-esteem, health locus of control, and resilient personality as predictors of substance abuse among in-school adolescents in Ibadan, with a specific objective of determining whether self-esteem differentiates and predicts substance abuse. Using a cross-sectional survey design, they purposively selected six secondary schools and administered 315 questionnaires; 315 were retrieved and 309 were valid for analysis. Data were analyzed with independent-samples t-tests and multiple regression in SPSS version 23 at $\alpha = 0.05$. Adolescents with low self-esteem reported higher substance abuse than those with high self-esteem [$t(307) = 7.24, p < 0.05$]; however, self-esteem did not independently predict substance abuse in the regression model ($\beta = -0.08, t = -0.65, p > 0.05$). The study concluded that self-esteem differentiates users but is not a significant independent predictor when combined with locus of control and resilience. Limitations include self-report bias, cross-sectional design (no causality), single LGA (limited generalizability), and reliance on psychological scales without biochemical verification.

Akpunne et al. (2020) examined the patterns and predictive influence of psychoactive substance use (PSU) on sexual harassment and self-esteem among female Nigerian undergraduates, with a specific objective of determining whether PSU predicts self-esteem. Using a cross-sectional survey



design, they stratified and selected 500 female polytechnic students across four departments; 500 questionnaires were distributed, all were retrieved, and 500 were valid for analysis. Data were analyzed with descriptive statistics, Pearson correlation, and multiple regression in SPSS version 23 at $\alpha = 0.05$. PSU did not significantly predict self-esteem ($R^2 = 0.028$, $p = 0.115$), indicating a non-significant effect. The study concluded that while PSU predicts exposure to sexual harassment, it fails to predict self-esteem. Limitations include reliance on self-report (social desirability bias), cross-sectional design (no causal inference), single-institution sample (limited generalizability).

Family Background and Substance Abuse

Afolabi et al. (2025) assessed substance use and its contributory factors among university undergraduates in Lagos State, with a specific objective of examining the influence of family background on substance use. Using a descriptive survey design, they sampled 416 undergraduates from Lagos State University and the University of Lagos via multi-stage sampling; 416 questionnaires were distributed, all were retrieved, and 416 were valid for analysis. Data were analyzed with descriptive statistics (frequencies, percentages) and inferential tests in SPSS version 27. The study reported that 60.1% of substance-using respondents were influenced by family background, indicating family context as a major contributor. However, it did not provide a beta coefficient, t-statistic, or p-value for family background in a regression model, limiting precise effect-size interpretation. The authors concluded that family background and level of socialization are key drivers of substance abuse. Limitations include reliance on self-report (social desirability and recall bias), cross-sectional design (no causal inference), focus on two universities (limited generalizability).

Agubosi et al. (2024) investigated the influence of family background factors on substance use among in-school adolescents in Ilorin Metropolis, with a specific objective of determining which family background factors (e.g., parental involvement in anti-social activities, residential area, parental attitudes) influence adolescent substance use. Using a descriptive survey design, they sampled 200 adolescents via simple random sampling from a population of 241,324; 200 questionnaires were distributed, all were retrieved, and 200 were valid for analysis. Data were analyzed with mean, t-test, and ANOVA in SPSS at $\alpha = 0.05$. All 18 family background items scored above the 2.50 benchmark (means ≈ 3.38 – 3.63), indicating they influence substance use; gender differences were significant ($t = 3.696$, $p = .001$), but age ($t = -1.244$, $p = .215$) and religion ($F = 1.854$, $p = .159$) were not. The study concluded that family background factors significantly influence substance use. Limitations include reliance on self-report (social desirability bias), cross-sectional design (no causality), Ilorin-only sample.



Methodology

Research Design

The study employed a descriptive research design. The population of the study comprised all female undergraduate students in tertiary institutions in the FCT, between the age of 18-35 both married and unmarried, who are currently studying across all the tertiary institutions in the FCT. However, as this was a conceivably large and unknown number, the study relied on the use of a representative sample, determined using Cochran's (1977) formula for infinite population. The formula computes a necessary sample size, n , given a z-score at 5% alpha level (1.96), Z , population proportion, p , of 0.5 and margin of error (5%) as

$$n = \frac{1.96^2 \times 0.5(1 - 0.5)}{0.05^2}$$

$$n \approx 384$$

Although the sample size was determined to be 384, this number was inflated by 20% to 460 as suggested by Isreal (2013), to account for non-response, and other related issues such as straight-lining. In recruiting the participants for the study, a multistage sampling process was adopted. This involved, firstly, purposive sampling was used to select 5 tertiary institutions, University of Abuja, National Open University, Base University, Nile University, and Veritas University out of the 42 tertiary institutions in the FCT. The institutions were selected based on their relevance to the study, availability of female undergraduate students, accessibility to the researcher, and willingness of the institutions to participate. quota sampling in the allocation of equal proportions of 92 respondents to each of University of Abuja, National Open University, Base University, Nile University, and Veritas University. Subsequently, the snowball sampling technique was implemented to locate respondents within the different locations. The sampling process lasted till the quota for each location was met.

Data collected was in primary form, acquired as the views and opinions of respondents to closed-ended items of a structured questionnaire, via a cross-sectional survey. The research instrument was designed in two sections. The first, Section A, was concerned with the collection of preliminary information, including sex, age, area of business specialisation and duration of business operation. On the other hand, Section B, contains construct scales providing quantitative measurements for all constructs of the study. These scales, adapted from Nwosu et al. (2020), were structured based on the 5-point Likert Scale restricting responses to a level of agreement with each statement; providing options ranging from Strongly Disagree to Strongly Agree. The data collection process was carried out using the Drop-Off/Pick-Up (DOPU) method and lasted a period of two weeks. The field survey was carried out with the help of three research assistants.

Descriptive analysis was the method of analysis employed in the study in estimating relationship between components of psychosocial factors (peer influence, academic stress, self-esteem, family



background and substance use. The estimation was carried out via the use of the SPSS statistical software (version 27).

Results and Discussion

Out of the 460 questionnaires distributed, 453 were returned, after excluding those with incomplete or invalid responses, resulting in 412 usable questionnaires for subsequent analysis.

Descriptive Statistics Result

Peer Influence on Substance Use

	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)
Peers influence my decision to use substances	32 (7.8)	48 (11.7)	72 (17.5)	119 (28.9)	141 (34.2)
I am more likely to use substances when my friends use them	29 (7.0)	47 (11.4)	69 (16.7)	125 (30.3)	142 (34.5)
Pressure from friends can make me try substances	35 (8.5)	51 (12.4)	74 (18.0)	119 (28.9)	133 (32.3)
My peer group affects my attitude toward substance use	30 (7.3)	46 (11.2)	71 (17.2)	122 (29.6)	143 (34.7)
I may use substances to fit in with my friends	38 (9.2)	53 (12.9)	76 (18.4)	116 (28.2)	129 (31.3)

Source: SPSS Outcome, 2026

An average of 62.6 per cent of respondents agreed or strongly agreed with the five items on peer influence, with the highest endorsement recorded for the item on being more likely to use substances when friends do (64.8%). This indicates that peer influence is a strong perceived driver of substance use among the sampled female undergraduates. The finding agrees with Ahmed et al. (2025), who found peer influence the strongest predictor of drug use among health-training students in Adamawa State (AOR = 2.84), and with Umaru et al. (2025), who found peer influence the strongest motivator of initiation among Wukari tertiary students, with qualitative accounts describing use as a route to social acceptance. It is also consistent with Omoregie et al. (2026), who found peer pressure endorsed by 62 per cent of substance users in a southern Nigerian secondary school sample, a figure close to the present result. The convergence across health-training, tertiary, and secondary-school populations, and across both quantitative and mixed-methods designs, suggests peer influence operates fairly uniformly as a risk factor regardless of institutional type or research approach



Self-Esteem and Substance Use

	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)
Low self-esteem can make me more vulnerable to substance use	37 (9.0)	56 (13.6)	78 (18.9)	118 (28.6)	123 (29.9)
I may use substances when I feel that I am not good enough	41 (10.0)	59 (14.3)	76 (18.4)	115 (27.9)	121 (29.4)
Feelings of inadequacy can increase my likelihood of using substances	39 (9.5)	57 (13.8)	80 (19.4)	114 (27.7)	122 (29.6)
Lack of confidence in myself can contribute to substance use	42 (10.2)	61 (14.8)	77 (18.7)	113 (27.4)	119 (28.9)
I may turn to substances when I have negative feelings about myself	44 (10.7)	60 (14.6)	79 (19.2)	112 (27.2)	117 (28.4)

Source: SPSS Outcome, 2026

An average of 57.0 per cent of respondents agreed or strongly agreed that low self-esteem or feelings of inadequacy increase vulnerability to substance use. This agrees with Okurame et al. (2024), whose t-test found adolescents with low self-esteem reported significantly higher substance abuse than those with high self-esteem, and with Fuentes et al. (2020), who found several self-esteem domains significantly related to adolescent substance use in Spain. It contradicts, however, the regression finding of the same Okurame et al. (2024) study, where self-esteem lost significance once locus of control and resilience were entered into the model, and the finding of Akpunne et al. (2020), who found psychoactive substance use did not significantly predict self-esteem among female Nigerian polytechnic students. A plausible reason for the discrepancy is that self-esteem's effect on substance use may operate indirectly, through other psychological variables such as coping style or resilience, so that its bivariate association appears strong while its independent contribution weakens once such variables are statistically controlled.

Academic Stress and Substance Use

	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)
Academic pressure can increase my likelihood of using substances	48 (11.7)	65 (15.8)	82 (19.9)	111 (26.9)	106 (25.7)
I may use substances when I am stressed by schoolwork	51 (12.4)	67 (16.3)	79 (19.2)	109 (26.5)	106 (25.7)
Examination pressure can contribute to substance use	53 (12.9)	68 (16.5)	81 (19.7)	108 (26.2)	102 (24.8)
Heavy academic workload makes me feel more tempted to use substances	55 (13.3)	69 (16.7)	80 (19.4)	106 (25.7)	102 (24.8)
Stress from meeting academic expectations can lead to substance use	56 (13.6)	70 (17.0)	83 (20.1)	104 (25.2)	99 (24.0)

Source: SPSS Outcome, 2026



Academic stress recorded the weakest endorsement among the four constructs, with an average of only 51.1 per cent agreement across the five items, close to the midpoint of the scale. This is consistent with Hanafi (2025), who found academic stress fell below the acceptance threshold (mean = 2.46) and contributed less to drug abuse than peer pressure and psychological factors among undergraduates in North-East Nigeria. It contrasts, however, with Omeje et al. (2023), who found a significant positive correlation between academic anxiety and substance use among Godfrey Okoye University undergraduates ($r = .317$), and with Apare et al. (2024) and Omoregie et al. (2026), both of whom found stress-related variables significantly associated with substance use in their respective Nigerian samples. The relatively muted result in the present data may reflect the specific wording of the items, which framed stress narrowly around workload and examinations rather than the broader emotional strain captured by Omeje et al.'s anxiety measure, or it may indicate that respondents in this FCT sample turn to substances primarily in response to social rather than academic pressures, a pattern the stronger peer-influence result would support.

Family Background and Substance Use

	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)
Family problems can influence an individual's involvement in substance use	72 (17.5)	83 (20.1)	91 (22.1)	87 (21.1)	79 (19.2)
Conflict within my family can increase the risk of substance use	76 (18.4)	86 (20.9)	88 (21.4)	84 (20.4)	78 (18.9)
Lack of parental support can contribute to substance use	69 (16.7)	89 (21.6)	93 (22.6)	84 (20.4)	77 (18.7)
Substance use in the family can influence an individual's behaviour	65 (15.8)	82 (19.9)	95 (23.1)	90 (21.8)	80 (19.4)
Poor family relationships can increase susceptibility to substance use	71 (17.2)	87 (21.1)	92 (22.3)	86 (20.9)	76 (18.4)

Source: SPSS Outcome, 2026

Family background recorded the lowest agreement of the four constructs, averaging only 39.8 per cent across the five items, with disagreement and neutral responses collectively outweighing agreement on every item. This contrasts sharply with Agubosi et al. (2024), who found all eighteen family-background items in their Ilorin study scored well above the acceptance benchmark (means of 3.38 to 3.63), and with Afolabi et al. (2025), who found 60.1 per cent of substance-using Lagos undergraduates attributed their use to family background. It is, however, broadly consistent with the direction of Ajayi et al.'s (2020) finding that family support functions primarily as a protective rather than a risk factor, which may partly explain the comparatively low endorsement of family-related risk items in the present sample if respondents' families are, on balance, more supportive than dysfunctional. A further likely explanation for the gap with Agubosi et al. (2024) and Afolabi et al. (2025) is social desirability: undergraduates may be more reluctant to implicate their own family circumstances in self-report items than in-school adolescents or younger respondents,



particularly where family reputation carries weight in a tertiary or FCT context, producing systematically lower endorsement even where actual family-related risk is present.

Conclusion and Recommendations

The findings of this study provide empirical evidence that peer influence, self-esteem, academic stress, and family background all bear on substance use among female undergraduates in tertiary institutions in the Federal Capital Territory, though not with equal weight. Peer influence recorded the strongest endorsement among the four constructs, indicating that peer modelling and peer pressure are the most prominent perceived driver of substance use in this population. Self-esteem followed, with a majority of respondents linking low self-esteem and feelings of inadequacy to vulnerability to substance use. Academic stress registered a comparatively weaker endorsement, suggesting that academic pressure plays a more modest role relative to the social and psychological factors examined. Family background recorded the lowest endorsement of the four, with the majority of respondents disagreeing or remaining neutral on family-related risk items, indicating that family circumstances were the least prominent of the factors examined in this sample. Overall, the study concludes that peer influence and self-esteem are the more pressing psychosocial concerns among female undergraduates in the FCT, and that guidance and counselling interventions addressing substance use in this population stand to gain the most by prioritising these two areas, while not neglecting academic stress and family background as contributing factors.

From the findings above, the following recommendations should be put into consideration by university management, counselling units, and policymakers in the Federal Capital Territory in order to reduce substance use among female undergraduates:

1. Counselling units in tertiary institutions should prioritise peer-focused interventions, including peer counselling, peer-led awareness campaigns, and structured peer-support groups, given that peer influence emerged as the most strongly endorsed factor associated with substance use among female undergraduates in this study.
2. Institutions should incorporate self-esteem-building components into their guidance and counselling programmes, such as individual counselling sessions and confidence-building workshops, since a majority of respondents linked low self-esteem and feelings of inadequacy to their vulnerability to substance use.
3. While academic stress registered a comparatively weaker association with substance use in this study, counselling units should nonetheless offer stress-management support, including study-skills coaching and examination-period counselling, to address the segment of students for whom academic pressure remains a contributing factor.
4. Although family background recorded the lowest endorsement among the four factors, universities should still maintain family-inclusive counselling options, such as periodic



parent-student engagement sessions, to support the smaller but real proportion of students whose family circumstances contribute to their substance use.

5. Policymakers and institutional authorities in the FCT should ensure counselling units are adequately staffed and resourced, since the combined influence of peer, psychological, academic, and family factors identified in this study indicates that substance use among female undergraduates requires a multi-pronged rather than single-factor response.

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