Interventions for Alcohol and Drug Misuse Prevention, Treatment and Recovery in Nigeria: Systematic Mapping of Research and Available Interventions

Awosanya Adejumoke[1], Kwapnoe Aaron Peter[2*], Kpurugbara Celestine[2], Awosanya Yusuff[2]

Teesside University, UK

[2]DFAB Research, UK

DOI: https://doi.org/10.51244/IJRSI.2026.1307000178

Received: 17 July 2026; Accepted: 22 July 2026; Published: 05 August 2026

ABSTRACT

Alcohol and drug abuse are significant and growing global public health concerns, particularly in low- and middle-income countries, where prevention, treatment, and rehabilitation services are often limited or under-resourced. This systematic literature review mapped the interventions for alcohol and drug misuse prevention, treatment and recovery in Nigeria. The SPIDER framework for systematic literature review was used to develop keywords and a Boolean function to source and retrieve relevant articles. Publications were sourced and retrieved from PubMed, PsycINFO, and CINAHL databases, and 28 articles were deemed relevant to the study. The content of the publication was analysed and categorised according to the following themes: prevention, treatment, recovery, and rehabilitation approaches to drug and substance misuse. The reported interventions included community-based, peer/family/tenant-led interventions, compassion-focused therapy, social-media-based intervention, Multiple Intelligences Teaching Approach (MITA), Group-focused Cognitive Behavioural Health Education Program (GCBHEP), Car, Relax, Alone, Forget, Friends, and Trouble (CRAFFT), harm reduction, restorative justice, and Cognitive Behavioural Therapy Intervention (CBT). Additionally, most of the studies and reports were prevalent in metropolitan and urban regions of Nigeria (Lagos, Kano, Jos, Uyo and Abuja). There seems to be an evolving and disjointed focus for the interventions available in Nigeria in the context of alcohol and drug misuse. While there is growing awareness of the psychosocial and behavioural aspects of substance misuse in existing interventions, programmatic implementation is constrained by structural health system limitations, weak program evaluation, limited recovery support systems, and limited sectoral integration.

Keywords: Alcohol, Intervention Prevention, Treatment, Reduction, Recovery, Nigeria

BACKGROUND

Alcohol and drug abuse is a significant and growing global public health concern, particularly in low- and middle-income countries, where prevention, treatment, and rehabilitation services are often limited or under-resourced (Johnson *et al*., 2022). Additionally, Tarela *et al*. (2025) assert that the use of psychoactive substances, including alcohol, cannabis, opioids, and prescription medications, has become a pressing public health and social concern in Nigeria, with significant implications for individuals, families, and communities. Where the continued misuse of substance and drug abuse can cause dependence, mental health issues, and social ineffectiveness (Kolawole *et al*., 2025).

According to Adeleke and Iyanda (2024), the national prevalence of drug use is 14.4%, with considerable regional variation, ranging from 7% in Jigawa State to 33% in Lagos State. Adeleke and Iyanda also identified in their study substantial hotspots of injecting drug use (IDU) in the south-western states of Nigeria, while cold spots were observed in the Federal Capital Territory and Nasarawa State. Commonly used substances include alcohol, cannabis, tramadol, codeine-based cough syrups, and other opioids (Tarela *et al*., 2025). Among these, alcohol remains the most widely consumed psychoactive substance, largely due to its cultural acceptance, affordability, and widespread availability, particularly in the form of locally produced beverages such as palm

wine and distilled spirits (ogogoro) (Daniel *et al*., 2024). In many Nigerian social settings, alcohol consumption is deeply embedded in cultural and social practices (Nwagu *et al*., 2017). However, excessive alcohol use is associated with numerous adverse health outcomes, including injuries, mental health disorders, and an increased risk of chronic diseases (Shield *et al*., 2014).

Young people represent one of the most vulnerable population groups affected by alcohol and drug misuse, as evidenced by the findings of Idowu *et al*. (2023), reavealing that substance use among adolescents and young adults in Nigeria has shown an increasing trend, particularly in rural communities, where nearly 30% of respondents reported alcohol consumption and a substantial proportion engaged in the misuse of other substances. Similarly, Tebu *et al*. (2025) reported that exposure to illicit substances remains high among young people in Nigeria, with socio-demographic factors such as gender, peer influence, and family background playing significant roles in the initiation and continuation of substance use behaviors. These findings highlight the complex interaction of socioeconomic, cultural, and environmental factors that contribute to substance misuse in Nigeria. Such factors not only increase vulnerability to substance use but also present significant challenges for public health interventions aimed at prevention and treatment.

According to Onifade *et al*. (2011), the number and distribution of substance use disorder treatment facilities are low and are not uniformly distributed in the country, thereby limiting the treatment access of many affected people. Moreover, the existence of structural obstacles such as insufficient funding, lack of qualified personnel and poor policy execution all keep hampering the performance of the available intervention programmes. Consequently, Alamukii (2026) highlighted stigma, lack of awareness of the treatment services, and adherence to informal or alternative treatment methods as the primary obstacles to treatment engagement. Alcohol and drug misuse are increasingly on the rise, yet the prevention, treatment, and recovery mechanisms of drugs are still incomplete in Nigeria.

General socio-economic forces on top of the health system constraint further aggravate the problem. Nigeria has been linked to rapid urbanisation, unemployment and social inequalities, which have led to increased substance consumption. According to Adeleke and Iyanda (2024), economic vulnerability and demographic sets are among the factors that contribute to the differences in illicit drug use within the country. More so, the concerted marketing and promotion of alcohol brands, especially to the youths via social media and entertainment sectors, have been termed "commercial determinants" that have the potential of inducing incremental consumption as advanced by Akpunne *et al*. (2025). All these dynamics highlight the important idea that substance misuse is not a simple behavioural issue in an individual, but a multi-faceted problem in the health of the population, influenced by structural, cultural and economic factors.

Rationale for the Study

There is limited evidence regarding the availability, effectiveness, and distribution of prevention, treatment, and recovery interventions for alcohol and drug misuse in Nigeria. Existing research has predominantly focused on the prevalence of substance misuse and its associated risk factors (Idowu *et al*., 2023; Olanrewaju *et al*., 2022; Durowade *et al*., 2021), with relatively little attention given to systematically examining the interventions currently available and evaluating their effectiveness. This highlights the need to map and synthesise the existing body of evidence to identify knowledge gaps and determine which intervention strategies show the greatest potential for addressing alcohol and drug misuse in Nigeria.

Given the multidimensional and complex nature of substance misuse, systematic mapping provides a valuable methodological approach for synthesising and categorising available evidence on prevention, treatment, and recovery interventions. Such an approach can assist policymakers, researchers, and public health practitioners in identifying research priorities, informing resource allocation, and guiding the development of effective intervention strategies. By classifying existing interventions across prevention, treatment, and recovery domains, systematic mapping can provide a comprehensive overview of current efforts and their effectiveness (Croot *et al*., 2019). A clearer understanding of the available evidence is essential for developing and implementing evidence-based strategies to effectively reduce the burden of alcohol and drug misuse in Nigeria.

Research Question

What are the interventions for alcohol and drug misuse prevention, treatment and recovery in Nigeria?

Research Aim

To assess and map the interventions for alcohol and drug misuse prevention, treatment and recovery in Nigeria

Search strategy for the Study

Justification for the use of the SPIDER Framework to develop a Search Strategy

A properly developed search strategy is of central interest in systematic evidence synthesis since it guarantees that pertinent studies are located in a conscientious, reproducible, and comprehensive way. In systematic mapping research, identification of high-quality research is not the sole objective; the researcher also aims to determine the extent of available research on a topic (Montgomery *et al*., 2022). Hence, the search strategy should be tailored in such a way that it brings in as broad a body of literature concerning alcohol and drug abuse interventions, prevention measures, treatment modalities, and recovery interventions in the Nigerian environment. A structured search strategy, according to Peters *et al*. (2020), leads to less selection bias and makes the mapping process more reliable as relevant studies are identified through a systematic search and not through a selection process.

The SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, and Research type) was used to develop a search strategy to carry out this research. According to Cooke *et al*. (2012), the SPIDER framework was indicated to be especially applicable to systematic mapping and the qualitative-dominant research in the field of public health, as a wider range of study designs, such as qualitative studies, mixed-method studies, programme evaluation, and policy analysis, can be identified. In comparison to PICO, which is more suitable in clinical trials, SPIDER allows more comprehensive research questions and multi-faceted public health interventions, which are suitable to study the research problem of substance misuse intervention used in practice (Methley *et al*., 2014). The SPIDER model allows creating specific search terms and words that capture the main essence of the research question (Table 1).

Table 1. The SPIDER components for the study

SPIDER component	**Justification**
sample (S)	focuses on populations affected by substance misuse in Nigeria, including adolescents, adults, and high-risk groups
phenomenon of interest (PI)	refers to alcohol and drug misuse, including both licit substances (such as alcohol) and illicit or misused prescription drugs
design (D)	The component captures empirical studies that evaluate or describe interventions, including program evaluations, cross-sectional studies, qualitative studies, and mixed-method research.
evaluation (E)	The component focuses on outcomes related to prevention, treatment, recovery, behavioural change, or policy effectiveness.
research type (R)	includes qualitative, quantitative, and mixed-methods studies to ensure that the mapping process captures the full range of available evidence.

Databases and search Terms

The database that was searched are PubMed, PsycINFO, and CINAHL.

Using the SPIDER Framework to Develop Relevant Keywords for the Systematic Mapping

The search strategy, which is designed so that the keywords are structured around every SPIDER element, is comprehensive as well as specific in its approach, increasing the prospects of finding the literature on the interventions on alcohol and drug abuse in Nigeria (Table 2). Thus, bolstering the methodological rigour, reproducibility and evidence mapping process reliability by using a transparent search process with clearly defined keywords tied to the study variable.

Table 2. The table below outlines a detailed keyword framework developed using SPIDER.

SPIDER Component	Concept for the Study	Keywords / Search Terms
S – Sample	Populations affected by alcohol or drug misuse in Nigeria	adolescents, youth, young adults, adults, community populations, university students, high-risk groups, substance users, drug users, people with substance use disorder, Nigerian population
PI – Phenomenon of Interest	Alcohol and drug misuse	alcohol misuse, alcohol abuse, alcohol consumption, substance misuse, substance abuse, substance use disorder, drug misuse, illicit drug use, psychoactive substance use, opioid misuse, cannabis use, tramadol misuse
D – Design	Research designs examining interventions	intervention study, program evaluation, cross-sectional study, qualitative study, mixed-methods study, case study, observational study, implementation research
E – Evaluation	Outcomes related to prevention, treatment, and recovery	prevention programmes, treatment outcomes, rehabilitation services, recovery programmes, harm reduction, behavioural change, intervention effectiveness, program impact, public health intervention
R – Research Type	Types of evidence relevant to the mapping study	qualitative research, quantitative research, mixed-methods research, intervention evaluation, implementation research, policy analysis

Using these keywords, search strings are constructed with Boolean operators.

("substance misuse" OR "drug abuse" OR "alcohol misuse" OR "substance use disorder") AND ("prevention" OR "treatment" OR "rehabilitation" OR "recovery programme" OR "harm reduction") AND ("Nigeria").

The systematic use of the SPIDER framework to develop keywords enhances the selection of evidence on various intervention approaches and research designs to capture relevant studies.

Inclusion and exclusion criteria

In the case of a systematic mapping study, the inclusion and exclusion criteria determine the studies that are to be included in the study. To guarantee transparency, minimise selection bias, and methodological rigour, it is critical to set clear criteria to use in the screening process (Peters *et al*., 2020). When it comes to mapping the intervention that can be applied to the prevention of alcohol and drug misuse, treatment, and recovery in Nigeria, the criteria are designed in such a way that is limited to studies that directly pertain to the Nigerian scenario and evidence related to an intervention.

Inclusion Criteria

- Studies involving individuals or populations affected by alcohol or drug misuse, including adolescents, adults, high-risk groups, or community populations in Nigeria.

- Studies examining alcohol misuse, drug abuse, substance use disorder, or psychoactive substance use.
- Studies that examine interventions related to prevention, treatment, rehabilitation, harm reduction, recovery programmes, or policy interventions addressing substance misuse.
- Empirical studies including quantitative, qualitative, and mixed-methods research, programme evaluations, intervention studies, and policy analyses.
- Studies conducted in Nigeria or studies explicitly analysing substance misuse interventions implemented within Nigeria.
- Peer-reviewed journal articles, credible institutional reports, and relevant grey literature from recognised organisations (e.g., public health agencies).
- Studies published from 2015 onwards to capture recent evidence and current intervention approaches.
- Studies published in English, given that it is the official language of academic publication in Nigeria.

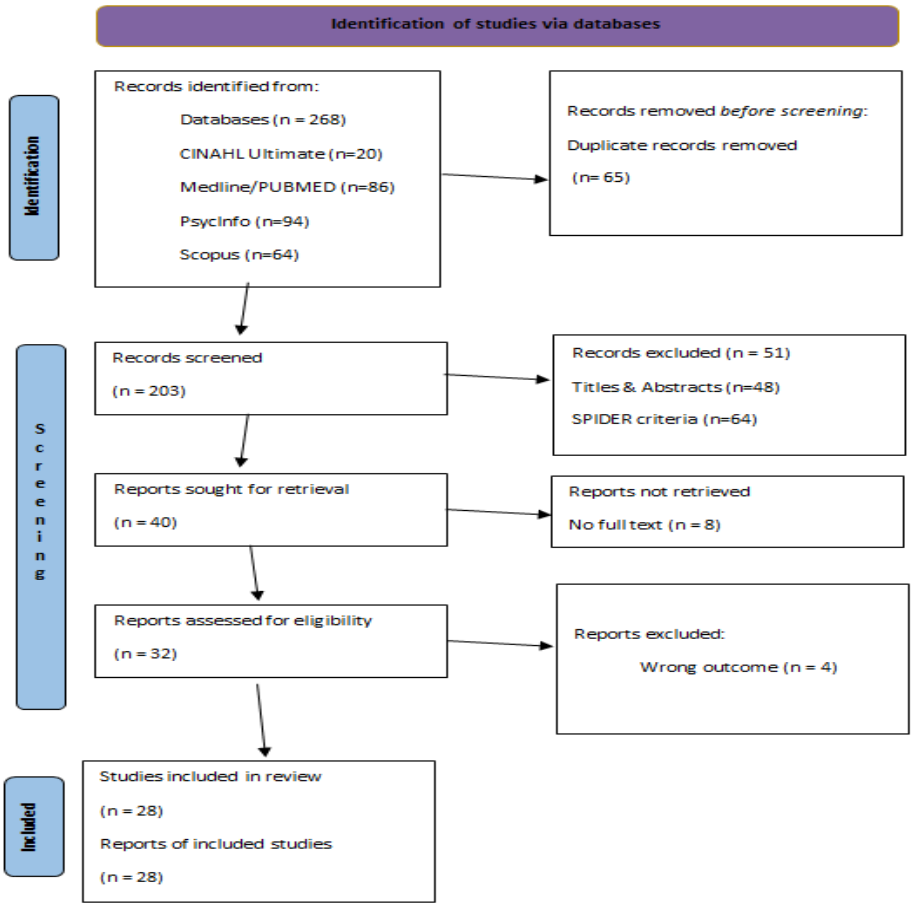
Exclusion Criteria

- Studies focusing on populations outside Nigeria or those not related to substance use or misuse.
- Studies focusing on unrelated health conditions or behaviours not associated with alcohol or drug misuse.
- Studies focusing solely on prevalence, risk factors, or epidemiology without discussing any intervention or response strategy.
- Opinion pieces, editorials, commentaries, conference abstracts without full data, and non-empirical literature lacking methodological detail.
- Studies conducted in other countries without specific relevance to Nigeria.
- Non-academic sources such as blogs, unverified online articles, or media reports.
- Studies published before 2010 are not considered highly influential or foundational to intervention research in Nigeria.
- Studies published in languages other than English where translation is unavailable.

Screening process using the PRISMA Guidelines

The Preferred Reporting Items (PRISMA) 2020 guideline is a commonly used tool in enhancing the transparency and methodological rigour of systematic evidence synthesis (Scheme 1). Page *et al*. (2021) posit that this structured method is critical for systematic mapping studies since it is clear that search and selection of the literature have been reported and can be replicated. It should be added that the main benefit of PRISMA is that it increases the level of transparency and accountability of the review process. PRISMA minimises the chances of selective reporting and maximises evidence synthesis credibility by asking researchers to report the details of processes like search and eligibility criteria and screening decisions made. Public reporting is also beneficial because other researchers and policymakers can critically evaluate the reliability and exhaustiveness of the findings of the review (Sizo *et al*., 2025; Page *et al*., 2021). Moreover, PRISMA allows reproducing the systematic reviews and upholding the methodological similarity. The guideline recommends explicit and transparent record keeping of identification, appraisal and synthesis of studies, which enhances reproducibility and assists the readers to determine the strength of the review methodology. It is especially pertinent to conduct mapping work to develop an overview of the available evidence based on multifaceted problems in the field of public health, like alcohol and drug substance abuse interventions (Shaheen *et al*., 2023). By enhancing the methodological rigour, PRISMA improves the systematic mapping process through the stimulation of

transparent reporting, minimisation of bias, and, finally, by making sure that the selection of the study process is as transparent as possible.



Scheme 1. The PRISMA outline for study inclusion and exclusion

Quality appraisal for the selected publications

The Joanna Briggs Institute (JBI) Critical Appraisal Tool was used in evaluating the quality of retrieved studies by assessing the reliability and credibility of the study's findings, determining how applicable the study is to the research question or context, and evaluating the outcomes and implications of the study's findings. Especially, as it relates to the research question for this study. This was achieved by evaluating the methodological quality, internal validity and risk of bias within the included study. Ensuring that the method is scientific, transparent, reproducible and supports that objective of the study and author bias was identified.

The JBI appraisal tool is used in systematic mapping studies where evidence can be represented by various study designs, including qualitative studies, cross-sectional surveys, intervention assessments, and others; in this scenario, the appraisal tools include design-specific checklists by various research approaches. Hence making it a suitable tool to critically evaluate the credibility and methodological rigor of heterogeneous evidence, which is typical of the work of public health intervention researchers (Hilton, 2024). Munn *et al.* (2020) asserts the tool to be helpful in assessing the internal validity, methodological transparency, and possible sources of bias in individual studies. Ensuring that the evidence is not only relevant but also methodologically sound, which enables conclusions made based on the synthesis to be more reliable. However, Azarian *et al.* (2023) assert that the tool is typically applied to classify the quality of methodology of studies. Regardless, the JBI framework is considered to be very appropriate since it offers a systematic and transparent system of assessing the validity of various research designs. The JBI critical appraisal tool improves the methodological rigour of the process of conducting the systematic mapping because it allows a consistent assessment of the quality of the studies and possible biases.

Data extraction and mapping strategy

Systematic mapping studies require a well-designed data extraction and mapping strategy since it facilitates the systematic organisation and synthesis of evidence from diverse studies. Unlike conventional systematic reviews, which mainly concentrate on estimating the efficacy of interventions, the scope, nature, and dispersion of evidence available in an area of research is the primary goal of systematic mapping (Peters *et al*., 2020). The analysis process is often carried out through designing an extraction form that extracts the essential data in a systematic way from each of the included studies. Such variables as bibliography information (author, year of publication), place of the study in Nigeria, type of the study design, population characteristics, and the type of the intervention (prevention, treatment, harm reduction, or recovery), are considered as core variables in the study. A structured extraction template increases consistency and reliability, which is considered to provide all reviewers with similar data regarding studies (Aromataris *et al*., 2020).

The mapping plan consists of classifying the extracted data according to thematic areas of evidence in order to depict patterns and literature gaps. The selected studies were categorised based on the type of intervention (i.e., community-based prevention programmes, clinical treatment services, rehabilitation and recovery programmes, and intervention). Other mapping dimensions can involve the target population (e.g., adolescents, university students, community populations), mapping within the territory of Nigeria, and the methods of undertaking the research. Such categorisation allows creating evidence maps or tables in which the distribution of the studies according to intervention groups and research design is demonstrated in a visual manner (Miake-Lye *et al*., 2016). Nevertheless, systematic mapping studies have limitations in data extraction and mapping strategies, too. Since the main aim is to describe and classify evidence and not measure the performance of interventions, the mapping process might be shallow in measuring the cause and effect or the interventions' consequences (Miake-Lye *et al*., 2016).

FINDINGS

Overview and Characteristics of Included Studies – PRISMA Statement

The mapped literature on alcohol and drug misuse interventions in Nigeria demonstrates increasing scholarly and public health attention toward prevention, treatment, intervention, and recovery strategies. The 28 included studies were conducted across different regions of Nigeria; 20 studies originated from Lagos, Jos, Kano, Uyo, Ogbomoso, Nsukka, Ilorin, Enugu, and Bauchi, suggesting a concentration of evidence within metropolitan areas and highlighting geographical disparities in the evidence base. 16 studies employed a cross-sectional approach and, with 14 of the studies adopting qualitative methodologies.

9 studies focused on community-based intervention, while school-based, prison-based and community-based studies were not common but increasingly recognised as important settings for preventive interventions. The populations studied primarily included drug users, adolescents, students, and individuals undergoing rehabilitation or treatment. The substances examined across the literature included alcohol, cannabis, opioids, tramadol, and other psychoactive substances. The findings collectively demonstrate that interventions in Nigeria are predominantly psychosocial, educational, behavioural, community-oriented, and family-centred (Table 3).

Data Extraction table for the Included Studies

Table 3. Insights extracted from the selected studies

s/n	Study Key Variable	study location	Study population	Intervention type	study design	Study base	Study approach	Intervention approach	Citation
1	Readiness to Change; Enthusiasm; Stages of Change	northern	drug-users	treatment	cross-sectional	hospital-based	descriptive	change readiness and	Abiola *et al*., (2015)

								treatment eagerness	
2	Family Background; Peers	Lagos	drug-users	prevention	cross-sectional	hospital-based	exploratory	Peer and Family	Adejoh *et al.*, (2020)
3	Family Relations; Social Support; Substance-Related Disorders rehabilitation	Lagos	drug-users	recovery	cross-sectional	hospital-based	descriptive	Peer and Family	Adejoh *et al.*, (2018)
4	school base management	Lagos	students	prevention	cross-sectional	school-based	descriptive	school-based screening	Adewuya and Wright, (2026)
5	Psychosocial Factors; Sympathy	Ogbomoso	youth	treatment	longitudinal	community-based	descriptive	compassion-focused therapy	Agberotimi (2017)
6	Substance-Related Disorders prevention & control	Multiple Location	youth	prevention	longitudinal	social media based	descriptive	social media-based intervention	Ahmad *et al.*, (2022)
7	Adolescent Development; Coping Behavior; Protective Factors; Resilience (Psychological)	nil	nil	Prevention	Literature review	literature review	exploratory	cultural sensitivity	Anona *et al.*, (2025)
8	government and community involvement	nil	nil	prevention	Literature review	literature review	exploratory	government and religious influence	Jatau *et al.*, (2021)
9	Community Health Services; Social Behavior; Attitude to Health; Police; Health Personnel; Communities; Stigma; Harm Reduction; Social Welfare	36 states of the federation	key informants (e.g. police officers, health workers)	treatment	cross-sectional	community-based	descriptive	Community-based services	Nelson *et al.*, (2025)
10	Legal Arrest and Detention	Uyo	youth	prevention	cross-sectional	community-based	exploratory	Tenant or peer-led	Nelson, (2022)
11	Law Enforcement and Personnel; Violence	Uyo	youth	recovery	cross-sectional	community-based	exploratory	Treatment and social services with emphasis on decriminalized de facto and arrested users directed to treatment and skills training programmes)	Nelson, (2021)
12	Health Education; Substance Use Disorders Prevention and Control		pupil	prevention	cross-sectional	case-control	exploratory	Multiple Intelligences Teaching Approach (MITA)	Nwagu *et al.*, (2015)

13	Adverse Childhood Experiences; Substance Use Disorders Risk Factors; Social Determinants of Health In Adolescence and Adulthood Psychoeducation; Health Policy; Policy Making	Kano	general populace	prevention	cross-sectional	community-based	exploratory	Treatment and social services (Gender, age-range, educational levels, and ACEs are determinants of SUD)	Oguntayo *et al*., (2024)
14	Drug Abuse; Psychometrics	Lagos	inmates	recovery	cross-sectional	prison-based	exploratory	CRAFFT (Car, Relax, Alone, Forget, Friends, and Trouble)	Ola and Atilola, (2017)
15	Harm Reduction; Community Reintegration and Health Services; Health Services Needs and Demand; Empowerment; Family Support; Cultural Sensitivity	Akure	Parents	recovery	cross-sectional	hospital-based	exploratory	Peer and Family	Omale *et al*., (2025)
16	Substance-Related Disorders epidemiology; Schools; Students	Ilorin	secondary students	prevention	longitudinal	school-based	descriptive	Peer and Family	Omotoso *et al*., (2023)
17	Psychotherapy, Group Methods; Cognitive Therapy Methods; Health Education Methods	Nsukka	inmates	recovery	longitudinal	case-control	exploratory	group-focused cognitive behavioral health education program (GCBHEP)	Onyechi *et al*., (2017)
18	Professional involvement in drug and substance management	Kaduna State	pharmacist	prevention	cross-sectional	hospital-based	exploratory	Professional integration	Rotimi *et al*., (2022)
19	Therapeutic Processes; Incarcerated	Jos	inmates	prevention	longitudinal	prison-based	descriptive	Professional integration	Ugwoke *et al*., (2016)
20	social cognitive model; behavioural change model	nil	nil	prevention	Literature review	literature review	descriptive	Social cognitive model	Egharevba, (2025)
21	Faith-based informal mechanism; social control	Kano	Hisbah officers	prevention	cross-sectional	community-based	exploratory	Faith-based	Uzobo *et al*., (2024)
22	Harm reduction strategies	nil	nil	prevention	Literature review	literature review	exploratory	Harm Reduction	Olarinde *et al*., 2025
23	Street children, Psychosocial skills intervention	Kajola Local Government	street children	recovery	longitudinal	community-based	exploratory	Psychosocial Skills Intervention	Adebiyi and Owaje, (2017)
24	Acceptance and awareness; barriers; harm reduction	Enugu	Caregiver	recovery	cross-sectional	community-based	descriptive	Harm Reduction	Onu *et al*., (2021)
25	Community Response, Restorative Justice	nil	nil	prevention	Literature review	literature review	exploratory	Restorative Justice	Nnam, (2017)

26	Harm reduction, Life skills training	Ikeja, Lagos State; Ibadan, Oyo State and Abuja, Federal Capital City	hard-to-reach adults	treatment	cross-sectional	community-based	exploratory	Harm Reduction	Daramola and Olley, (2023)
27	psycho-social treatment; social work	South-west	university students	treatment	cross-sectional	University-based	exploratory	Psycho-social treatment	Oluyemi *et al.*, (2019)
28	CBT; Psychological Adjustment; Rehabilitation	Bauchi	Abusers under rehabilitation	recovery	longitudinal	facility based	exploratory	Cognitive Behavioral Therapy Intervention (CBT)	Auwalu *et al.*, (2024)

Thematic Analysis of Data Extracted from the Included Studies

Prevention Interventions

Reviewed studies revealed that preventive interventions in Nigeria are mainly geared to addressing adolescent and young people, mostly in schools and communities. The 10 articles highlighted the significance of peers, family relationships and family environments as significant factors in shaping substance use among youth. Adolescent substance use disorders (SUDs) were found to be preventable through screening programmes with tools like the MINI-Kid and Car, Relax, Alone, Forget, Friends, and Trouble (CRAFFT) framework (Adewuya & Wright, 2026; Oluyemi *et al*., 2019; Ola & Atilola, 2017). The preventive interventions were designed to identify and to undertake referral pathways for at-risk students to facilitate access to treatment and counselling. Suggesting that school screening has the potential to reduce treatment gaps and enhance access to adolescent-appropriate services.

Psychosocial and behaviour change education interventions were reported by Adebiyi and Owaje (2017) and Nwagu *et al* (2015), in their study of Psychosocial Skills Interventions, and Multiple Intelligences Teaching Approaches (MITA), respectively, found that while improving awareness and resilience among adolescents, enhancing self-regulation and decision making is also important. Nwagu *et al* (2015) explored Multiple Intelligences Teaching Approaches (MITA), a study that also highlighted the need to enhance decision-making and self-regulation among adolescents to improve their awareness and resilience. Consequently, Onyechi *et al* (2017) investigated the Group-focused Cognitive Behavioural Health Education Programmes (GCBHEP), establishing the importance of enhancing awareness and resilience among adolescents, in addition to the importance of enhancing self-regulation among adolescents and their decision making. Social cognitive models (Egharevba, 2025) also showed that enhancing self-regulation and decision-making of adolescents is important, along with their awareness and resilience. The interventions intended to tackle behavioural risk factors related to substance use and to build up coping skills and emotional regulation.

The studies by Omotoso (2023); Adejoh *et al*. (2020) and Adejoh *et al*. (2018) reported that parental supervision, family cohesiveness and positive peer networks were found to be protective factors against substance misuse. The evidence indicates that youth who are exposed to peer pressure, low family bonding and family dysfunction are at a greater risk for alcohol/drug misuse. These studies recommended parental education, family counselling, and peer support as important preventive measures; therefore, such measures are recommended to be adopted and practised in schools and health centres. On the other hand, social media applications were determined by Ahmad *et al*. (2022) to be the new tools for awareness building and behaviour change, especially amongst the youth. Moreover, religious institutions are reported by Uzobo *et al*. (2024) and Jatau *et al*. (2021) to be influential actors in substance misuse prevention activities, as well as government-led sensitisation programmes. Although the studies called for awareness campaigns as a part of the preventive intervention, the effectiveness and sustainability of these measures are not being evaluated.

Treatment Intervention Approaches

Studies reported mainly psychosocial care, behavioural therapy, hospital-based care and harm reduction. Within Nigeria, it would seem that the two places most associated with substance misuse treatment would be hospitals or psychiatric facilities. The majority of treatment interventions were comprised of non-pharmacological measures that included behavioural modification, strengthening motivation and psychosocial support. Abiola *et al* (2015) identified that motivational and readiness-to-change frameworks are employed in treatment planning. Using the SOCRATES-8 frameworks to assess patients' readiness-to-treat, treatment motivation, and psychological resilience highlighted the need for treatment readiness and a motivational assessment of patients' psychological resilience before starting patients on treatment programmes. This method was found to be helpful in adjusting treatment plans and tracking the progress of treatment. Additionally, Agberotimi (2017) found that helpful therapeutic modalities for people with substance use disorder were Compassion-focused therapy. Likewise, Psycho-social treatments such as Cognitive Behavioural Therapy (CBT) that emphasise counselling, psychological rehabilitation, and behavioural management were revealed by Auwalu *et al*. (2024). These interventions targeted negative thought patterns and emotional reactivity, as well as bolstering coping skills.

Harm reduction interventions also had great prominence as reported by Olarinde *et al*. (2025), Daramola & Olley (2023), and Onu *et al*. (2021) approach acknowledged that drug abuse is more of a public health and social issue than a crime problem. Whereas Adebiyi and Owaje (2017) reported that social service interventions in the form of skills training (Psychosocial Skills Intervention), professional integration and rehabilitation support for substance users, as reported by Rotimi *et al*. (2022), and Ugwuoke and Ifeanyichukwu (2016). This was also complemented by evidence presented by Nelson (2023); Nelson (2018) and Nnam (2017) that tends to support the use of restorative justice practices and the decriminalisation frameworks that have the potential to divert people arrested for drug use offences to treatment and rehabilitation services rather than punitive incarceration, thus highlighting some of the limitations in the provision of effective treatment in Nigeria. Including stigma, lack of specialised treatment facilities, lack of addiction professionals, funding, and access to mental health services were often cited as problems. Treatment gaps were especially high in adolescents and those in underserved communities.

Interventions for Recovery and Rehabilitation

The reviewed studies showed that social support systems are crucial in maintaining recovery for people suffering from substance use problems. A promising facilitator of rehabilitation and reintegration was family support. Studies by Omale *et al*. (2025) and Omotoso *et al*. (2023) highlighted that family participation in providing financial, emotional and moral support was reported to consistently be an important factor that positively influenced expected recovery. The result of this investigation indicates that recovery in the Nigerian context is very relational and dependent on the community. Notably, peer-led and tenant-led recovery programs were also singled out as recovery supports that could help maintain abstinence and minimise relapse. These kinds of interventions fostered a sense of social connection, of accountability, of shared recovery experiences for substance users (Nelson, 2018). Faith-based rehabilitation was also reported by Jatau *et al.* (2021) due to the strong evidence of the strong influence of religious and spiritual practices in the Nigerian society. Highlighting that religious organisations were also known to offer support for counselling, emotional help and social reintegration for the recovering persons. Rehabilitation efforts focused on moving towards reintegration in society – community-based rehabilitation and professional integration programmes were reported by Anona *et al*. (2025); Nelson *et al*. (2025). The interventions primarily centred on vocational empowerment, employment chances and skills development to minimise risks of relapse and improve social functioning. While many recovery interventions seemed to have potential benefit, they were not evaluated in a rigorous fashion, and long-term effectiveness was not established.

Cross-Cutting Approaches

Substance misuse interventions in Nigeria are mainly psychosocial and behavioural oriented, with little evidence of the use of pharmacological and technologically advanced interventions. Furthermore, the course of prevention, treatment engagement and recovery outcomes was always influenced by family and peer factors. Even though most interventions were targeted in urban and institutional areas, with children's hospitals and

schools being the most targeted, communities in rural areas were underrepresented. The increasing understanding of drug misuse as a multi-dimensional public health problem demands multi-sectoral responses from healthcare, school, religious, and community organisations also emerged as another central theme. Most importantly, collaborative (team-based) and multidisciplinary models of intervention are increasingly supported in the reviewed studies and are not just clinical approaches.

Evidence Gaps Identified in the Literature

The literature mapping study identified that the vast majority of studies were descriptive, cross-sectional, and a few longitudinal or experimental studies examined the effectiveness of the intervention over time. Limited evidence was also found in relation to alcohol-specific interventions, with many studies being broadly focused on substance misuse as a whole, rather than focusing specifically on alcohol. Additionally, the interventions identified are largely descriptive and focused on urban interventions. Revealing that rigorous intervention studies translate to greater expansion of community-based services, culturally sensitive treatment models and long-term recovery programs, which are significant. Future research needs to focus on long-term assessment of interventions, rural communities, gender-responsive interventions, and the integration of substance use disorder services with public health and mental health services in Nigeria.

The studies reviewed had a limitation of not reporting on interventions for women, for rural populations, for older adult women and older adult men, and for marginalised groups. Additionally, there was little evidence on recovery and post-treatment rehabilitation, which were also explored much less extensively than prevention and treatment domains. In addition, there was a lack of evidence on how policies are implemented, the cost-effectiveness of the interventions, and the integration of substance misuse services into primary healthcare systems. Although digital interventions, mobile health technologies, and culturally adapted evidence-based therapies have increased in importance for the management of substance use globally, they were poorly represented in the literature.

DISCUSSION

The findings of this literature mapping review reveal that the interventions for alcohol and drug misuse in Nigeria are increasingly being approached from a psychosocial and behavioural perspective. The findings indicate a more prevention-oriented approach in adolescents and young adults, as well as psychosocial treatment models and community-oriented recovery approaches are pertinent. Focusing critically on the evidence shows that there remains significant work to do in terms of the evaluation of interventions, integration of interventions into systems, geographic extent of implementation, and provision of support for long-term recovery.

In line with global public health trends of early intervention and risk reduction, which underpins most of the interventions found in the Nigerian literature retrieved in this study. These patterns have also been found by Cadri *et al*. (2024) in LMIC nations, where substance misuse prevention is often a key activity in schools and community institutions that have high reach and accessibility. Additionally, Griffin *et al*. (2022) report the effectiveness of consistently implemented school-based prevention programmes in enhancing knowledge, delaying the initiation into drug use and increasing the ability to resist drugs when combined with family and community involvement. Despite this, the findings of this review suggest that many prevention interventions in Nigeria are highly awareness-raising and inadequately evaluated.

The use of awareness- and education-based approaches poses a important questions about the effectiveness of interventions, as evidenced by Mateu-Mollá *et al*. (2026) asserting that knowledge-based interventions have a limited impact in driving behaviour change when used as standalone interventions without the provision of other structural and psychosocial support systems. Some of the aforementioned and reviewed Nigerian studies reported on improved awareness or self-reported attitudes, but not on a decrease in the prevalence of substance use, relapse rates, or long-term behavioural outcomes. Thus, although prevention programmes seem to be common, it is unclear how much impact on behaviour they actually have.

There is a strong focus on psychosocial and behavioural interventions in the reviewed studies, which aligns with existing evidence that these types of interventions have an impact in the management of substance misuse

globally (Adams *et al*., 2026; O'Leary *et al*., 2025). The evidence is, however, much more limited in Nigeria than in higher-income countries, where a combination of psychosocial support and pharmacological treatment, as well as harm reduction services and community rehabilitation, is more prevalent, according to Ezeakunne and Unterrainer (2025). There was minimal representation of medication-assisted treatment, structured outpatient services for addiction, and integrated dual diagnosis services in the reviewed studies, and these are growing in their recognition as effective methods to manage substance dependence globally (Farhoudian *et al*., 2022). This may be due to inadequate funding, the absence of specialised mental health workers, inadequate integration of mental health into primary health care, and inadequate access to addiction treatment facilities, which have been pointed out as areas of inadequacies for mental health service delivery in Nigeria in previous studies (Chu *et al*., 2022). These concerns align with the findings of the review, in which most of the treatment interventions addressed were in tertiary and urban rehabilitation centres. There is a high concentration of these treatments, indicating that access to treatment is extremely uneven, especially among rural residents and disadvantaged groups.

The urban focus of intervention studies found in this review is noteworthy, as there is a geographical divide in public health in Africa, where service provision and interventions tend to be clustered in metropolitan centres (Korah *et al*., 2023). This urban focus may also mask the truth of substance abuse in rural and conflict and crisis-affected areas, where poor health care infrastructure, unemployment, high poverty levels, and insecurity may further contribute to vulnerability to substance reliance (Derefinko *et al*., 2018). Therefore, the small number of studies carried out in northern Nigeria and/or rural populations poses a significant lack of evidence with respect to generalization of policy recommendations bearing on knowledge and information equity.

The reviewed literature consistently pointed to peer influence, unemployment, family instability and social disorganisation as significant contributors for drug and substance misuse. This aligns with Stritzel's (2022) use of social ecological approach to explain that substance abuse focuses on how individual actions and habits are influenced by social factors and environments. Highlighting that a person's decision and habits is greatly influenced by the social conditions of the individual's environment and society. Likewise, Amaro *et al*. (2021) reveal that structural determinants, such as poverty, inequality, adverse childhood experiences, and social exclusion, are robustly linked with substance misuse. This limitation has significance suggesting that multi-level intervention combining employment supports, educational opportunities, housing stability, social welfare systems and clinical treatment interventions becomes necessary (McGinty and Daumit 2020). Additionally, Eddie *et al* (2025) call for full recovery-based Systems of Care that will provide employment support, housing services, peer recovery coaches, long-term counselling and social reintegration plans. Which may negatively impact on the gains from intervention can be relatively modest, and the risk of relapse can persist. Although these are the broader determinants, interventions in Nigeria seem to be targeting the individuals instead of the structures. These programmes revealed in studies focus on behavioural aspects and awareness creation rather than the underlying socio-economic vulnerabilities.

The reviewed studies provided an affirmative perspective on harm reduction and restorative approaches, Kerker and Adeyongo (2024) noted that substance abuse in Nigeria has a strong link with moral issues and social deviance. Additionally, communication from within communities, health care providers and police systems to people with substance use disorders is often discriminatory, as reported by Ebrahim *et al*. (2024), in other parts of sub-Saharan Africa. This aligns with the views of Medina *et al*. (2022), who state that stigma is found to be associated with delayed treatment-seeking, increased psychological distress, and inferior long-term treatment outcomes. The ongoing impact of stigma and criminalisation on treatment access and recovery experiences, significantly influences the adherence of substance users to treatment and rehabilitation efforts.

Harm reduction is a new paradigm, that was revealed in the selected studies; this changing paradigm in harm reduction approach is thus an important conceptual shift. According to Pridgen *et al*. (2025), harm reduction strategies have been proven to decrease overdose deaths, infectious disease transmission and treatment disengagement among people who use drugs in the United States. However, the literature review shows that harm reduction in Nigeria is not well developed and consistently applied. This is/or maybe partly because of legal, cultural, and political opposition to what might be seen as "enticing to drug use," as revealed by Wogen and Restrepo (2020).

Recovery and rehabilitation were relatively underrepresented in the reviewed studies, although the importance of recovery processes going beyond abstinence into reintegration, wellbeing and quality of life is now growing internationally (Inanlou *et al*., 2020). Family support, religious involvement and peer encouragement were common in family-based recovery in most Nigerian studies. This aligns with the stance of Apyewen and Edeh (2025), revealing the collectivist nature of Nigerian society, with its strong religious orientation, as families and religious institutions, in many instances, serve as informal welfare and support groups. The reviewed studies revealed limited evidence to support the effectiveness of culturally-based recovery methods on relapse prevention and long-term psychosocial outcomes, although these methods are socially acceptable and emotionally supportive.

Given that most of the reviewed studies were descriptive, cross-sectional or qualitative, only a few were intervention trials or longitudinal studies. This methodical approach reduces the interpretability of causes and results and decreases the confidence in the effectiveness of the intervention (Pérez-Guerrero *et al*., 2024). However, Jaguga *et al*. (2024) outlined restricted funding and insufficient research infrastructure, as well as low monitoring capacity, which limit the potency of programme evaluation. There is also a limitation on the use of standardised outcome measures, which further hinders evidence synthesis and comparison between studies. Furthermore, studies did not report relapse rates, treatment retention or long-term behavioural outcomes following intervention, using appropriately designed indicators. Although there have been more intervention studies, there is still not enough evidence to inform on the intervention models that are most effective, scalable and culturally sustainable in Nigeria.

The review also shows that there is a lack of attention for vulnerable and marginalised groups. Very few publications were available for women, older persons, IDPs, homeless people and those with co-occurring mental health disorders. This is especially troubling, as these communities are at risk from distinctive risk factors and barriers to treatment and recovery globally (Volkow & Blanco, 2023). Intervention approaches that consider gender and trauma are significant gaps in work done on substance misuse in Nigeria. In addition, only one study reported on media use for substance abuse management, which is an area that is globally relevant. According to Ojeahere *et al*. (2022) mobile interventions, telepsychiatry, online counselling and digital health recovery monitoring systems have demonstrated positive results in enhancing the accessibility and continuity of care in low-resource areas, especially. With the developing technology and a young population in Nigeria, the use of technology-based interventions could provide a large opportunity to expand the reach of prevention and treatment services.

CONCLUSION

The literature mapping review has shown that there has been a growing diversity and multidimensionality of interventions to address alcohol and drug misuse in Nigeria, ranging from prevention, treatment, rehabilitation and support for recovery. The evidence suggests that the prevention interventions appear to be predominantly directed at young people and adolescents, primarily focused through the school, through a psychosocial approach, peer-led interventions, family-based interventions and community-based sensitisation programmes. Current treatment interventions are mostly psychosocial and behavioural and include counselling, cognitive behavioural therapy (CBT), motivational techniques and hospital-based rehabilitation. The primary drivers of recovery are family networks, faith-based institutions, peer support and vocational reintegration. Nevertheless, there are significant flaws in the Nigerian intervention landscape as noted in the review. The vast majority of interventions are still locally driven, partial, and under-researched especially with regards to geographical spread, with little research evidence on long-term impact and sustainability. Key gaps emerged around vulnerable populations, women, digital interventions, and recovery-oriented systems of care, as well as around rural populations. In addition, structural barriers such as stigma, inadequate funding, limited access to addiction specialists, and a lack of adequate integration between addiction and other health care systems persist and hamper good intentions in the delivery of effective interventions.

RECOMMENDATION

There seems to be an evolving and disjointed focus for the interventions available in Nigeria in the context of alcohol and drug misuse. While there is growing awareness of the psychosocial and behavioural and public

health aspects of substance misuse in existing interventions, programmatic implementation is constrained by structural health system limitations, weak program evaluation, limited recovery support systems, and limited sectoral integration. This study found that although Nigeria has viewed substance misuse as a significant public health problem, there is still an urgent need for evidence-based, culturally responsive and integrated substance misuse intervention frameworks. To further enhance the national outcomes of substance misuse, future interventions should focus on the evaluation of interventions with rigour and the development of community-based services to expand the implementation of policies with greater strength, and support mechanisms to facilitate long-term recovery.

REFERENCE

1. Abiola, T., Udofia, O., Sheikh, T. L., and Sanni, K. (2015). Assessing Change Readiness and Treatment Eagerness among Psychoactive Substance Users in Northern Nigeria. Journal of substance abuse treatment, 58, 72–77. https://doi.org/10.1016/j.jsat.2015.06.012
2. Adams, A. S., Williams, T., Stein, D. J., Sibeko, G., Shoptaw, S., and Rollnick, S. (2026). Motivational interviewing for substance use among adults in low- and middle-income countries: A systematic review. S Afr J Psychiat., 32(0), a2555. https://doi.org/10.4102/sajpsychiatry.v32i0.2555
3. Adebiyi, A. O. and Owaje, E. T. (2017). Psychosocial Skills Intervention for Substance Use amongst Street Children in a Local Government Area in South West Nigeria. Journal of Community Medicine and Primary Health Care, 29(2):23-32.
4. Adejoh, S. O., Olorunlana, A., Adisa, W. B., and Onwuasoanya, O. (2020). Do peer and family factors determine substance abuse? voices of adolescents undergoing treatment in a psychiatric ward, Lagos, Nigeria. Archives of Psychiatry Research, 56:155-168 DOI:10.20471/dec.2020.56.02.04
5. Adejoh, S. O., Temilola, O. M., and Adejuwon, F. F. (2018). Rehabilitation of drug abusers: the roles of perceptions, relationships and family supports. Social work in public health, 33(5), 289–298. https://doi.org/10.1080/19371918.2018.1469063
6. Adeleke, R., and Iyanda, A. E. (2024). Analysing the geographic influence of financial inclusion on illicit drug use in Nigeria. Spatial and Spatio-Temporal Epidemiology, 49, 100655. https://doi.org/10.1016/j.sste.2024.100655
7. Adewuya, A. O., and Wright, K. O. (2026). The Rural-Urban Paradox and Focused Risk Profile of Adolescent Substance Use Disorders in Lagos, Nigeria: An Epidemiological Study. Substance use and misuse, 1–11. https://doi.org/10.1080/10826084.2026.2629000
8. Agberotimi, S. (2017). Efficacy of compassion-focused therapy in a sample of youth with substance use disorder in Ogbomoso, Nigeria. African Journal of Drug and Alcohol Studies.
9. Ahmad, J., Joel, U. C., Talabi, F. O., Bibian, O. N., Aiyesimoju, A. B., Adefemi, V. O., and Gever, V. C. (2022). Impact of social media-based intervention in reducing youths' propensity to engage in drug abuse in Nigeria. Evaluation and program planning, 94, 102122. https://doi.org/10.1016/j.evalprogplan.2022.102122
10. Akpunne, B. C., Onyesom, B., David, A., and Ayoade, O. O. (2025). Prevalence and Predicting Alcohol and Drug Use from Family Functioning of University Undergraduates: A Case for Decriminalization Advocacy. Asian Research Journal of Arts and Social Sciences, 23(5), 194–204. https://doi.org/10.9734/arjass/2025/v23i5694
11. Alamukii, A. (2026). Barriers to successful treatment of substance abuse among Nigerian youths: A systematic review. African Journal of Alcohol and Drug Abuse (AJADA), 14(1). https://doi.org/10.4314/ajada.v14i1.2
12. Amaro, H., Sanchez, M., Bautista, T., and Cox, R. (2021). Social vulnerabilities for substance use: Stressors, socially toxic environments, and discrimination and racism. Neuropharmacology, 188, 108518. https://doi.org/10.1016/j.neuropharm.2021.108518
13. Anona, K., Onigu-Otite, E., Conner, C., and Saxena, K. (2025). Trauma, resilience, and substance use in adolescents: A review article. Adolescent Psychiatry, 15(1), 53–74. https://doi.org/10.2174/0122106766318176241024065029
14. Apyewen, A. U., and Edeh, L. N. (2025). The Prevalence and Impact of Alcoholism on Christian Community in Taraba State, Nigeria. International Journal of Emerging Multidisciplinaries: Social Science, 5(1), 12. https://doi.org/10.54938/ijemdss.2026.05.1.547

15. Aromataris, E., Lockwood, C., Porritt, K., Pilla, B., and Jordan, Z. (Eds) (2020). JBI Manual for Evidence Synthesis. JBI; 2024. Available from: https://synthesismanual.jbi.global.https://doi.org/10.46658/JBIMES-24-01
16. Auwalu, S., Danladi, A., and Musa, B. (2024). Effect of Cognitive Behavioral Therapy Intervention on Psychological Adjustment of Client with Substance Abuse Disorder at NDLEA Rehabilitation Camp, Bauchi State Command, Nigeria. Kashere Journal of Education, 5(2): 22-29.
17. Aytur, S. A., Carlino, S., Bernard, F., West, K., Dobrzycki, V., and Malik, R. (2022). Social-ecological theory, substance misuse, adverse childhood experiences, and adolescent suicidal ideation: Applications for community-academic partnerships. Journal of Community Psychology, 50(1), 265–284. https://doi.org/10.1002/jcop.22560
18. Azarian, M., Yu, H., Shiferaw, A. T., and Stevik, T. K. (2023). Do We Perform Systematic Literature Review Right? A Scientific Mapping and Methodological Assessment. Logistics, 7(4), 89. https://doi.org/10.3390/logistics7040089
19. Cadri, A., Beema, A. N., Schuster, T., Barnett, T., Asampong, E., and Adams, A. M. (2024). School-based interventions targeting substance use among young people in low-and middle-income countries: A scoping review. Addiction, 119(12), 2048-2075. https://doi.org/10.1111/add.16623
20. Chu, C., Roxas, N., Aguocha, C. M., Nwefoh, E., Wang, K., Dike, C., and Iheanacho, T. (2022). Integrating mental health into primary care: evaluation of the Health Action for Psychiatric Problems in Nigeria, including Epilepsy and Substance (HAPPINESS) pilot project. BMC Health Services Research, 22(1), 333. https://doi.org/10.1186/s12913-022-07703-1
21. Cooke, A., Smith, D., and Booth, A. (2012). Beyond PICO: The SPIDER tool for qualitative evidence synthesis. Qualitative Health Research, 22(10), 1435–1443.
22. Croot, L., O'Cathain, A., Sworn, K., Yardley, L., Turner, K., Duncan, E., & Hoddinott, P. (2019). Developing interventions to improve health: a systematic mapping review of international practice between 2015 and 2016. Pilot and feasibility studies, 5, 127. https://doi.org/10.1186/s40814-019-0512-8
23. Daniel, E. O., Olawale, O. O., Avwerhota, M., Tomori, M. O., Popoola, I. O., et al. (2024). Prevalence and Correlates of Substance Use and the Effects on the Young People in a Southwestern State of Nigeria. American Journal of Applied Psychology, 13(3), 43-52. https://doi.org/10.11648/j.ajap.20241303.11
24. Daramola, A. S. and Olley, B. O. (2023). Risk Factors of Polysubstance Use Disorder and Efficacy of Harm Reduction Among Adults in Street Situations in Selected Cities in Nigeria. African Journal of Drug and Alcohol Studies, 22(1): 61-71. https://dx.doi.org/10.4314/ajdas.v22i1.4
25. Derefinko, K. J., Bursac, Z., Mejia, M. G., Milich, R., and Lynam, D. R. (2018). Rural and urban substance use differences: Effects of the transition to college. The American journal of drug and alcohol abuse, 44(2), 224–234. https://doi.org/10.1080/00952990.2017.1341903
26. Durowade , K., Elegbede , O., Pius-Imue, G., Omeiza , A., Bello , M., Mark-Uchendu , C., Adedipe , A., Aluko , O., Adeyeye, O., Akinola , O., Famuyiwa , O., Money , R., & Ogbonna , T. (2021). Substance Use: Prevalence, Pattern and Risk Factors among Undergraduate Students in a Tertiary Institution in Southwest Nigeria. Journal of Community Medicine and Primary Health Care, 33(2), 83–99. https://doi.org/10.4314/jcmphc.v33i2.6
27. Ebrahim, J., Adams, J., and Demant, D. (2024). Substance use among young people in sub-Saharan Africa: a systematic review and meta-analysis. Frontiers in psychiatry, 15, 1328318. https://doi.org/10.3389/fpsyt.2024.1328318
28. Eddie, D., O'Connor, J. B., George, S. S., Klein, M. R., Lam, T. C. S., Abry, A., Hoffman, L. A., Hennessy, E. A., Vilsaint, C. L., and Kelly, J. F. (2025). Peer Recovery Support Services and Recovery Coaching for Substance Use Disorder: A Systematic Review. Current addiction reports, 12, 40. https://doi.org/10.1007/s40429-025-00645-8
29. Egharevba, H. O. (2025). Tackling illicit drugs, substance use and addictions in Nigeria: The social cognitive model is a more effective alternative for rehabilitation. African Journal of Alcohol and Drug Abuse, 13: 180-195. doi: https://dx.doi.org/10.4314/ajada.v13i1.9
30. Ezeakunne, M. F., and Unterrainer, H. F. (2025). Substance abuse treatment in Nigeria: applying a biopsychosocial-spiritual framework at MACCARCA. Frontiers in psychology, 16, 1639570. https://doi.org/10.3389/fpsyg.2025.1639570

31. Farhoudian, A., Razaghi, E., Hooshyari, Z., Noroozi, A., Pilevari, A., Mokri, A., Mohammadi, M. R., and Malekinejad, M. (2022). Barriers and Facilitators to Substance Use Disorder Treatment: An Overview of Systematic Reviews. Substance abuse: research and treatment, 16, 11782218221118462. https://doi.org/10.1177/11782218221118462
32. Griffin, K. W., Botvin, G. J., Scheier, L. M., and Williams, C. (2022). Long-term behavioral effects of a school-based prevention program on illicit drug use among young adults. Journal of Public Health Research. https://doi.org/10.1177/22799036221146914
33. Hilton M. (2024). JBI Critical appraisal checklist for systematic reviews and research syntheses. The Journal of the Canadian Health Libraries Association, 45(3), 180–183. https://doi.org/10.29173/jchla29801
34. Idowu, A., Aremu, A. O., Akanbi, I. M., Eseigbe, G., Adewale, V., Awubite, L., Adebayo, O., Arisa, D., Adetona, B., Olaniyan, A., Olafisoye, E., Olorunshola, O., Eyitayo, J., Ogunlana, O., Aboloye, O., Mayor, A., and Olatunde, E. (2023). Prevalence, pattern and determinants of substance abuse among youths in a rural community of Osun State, Southwest Nigeria. African health sciences, 23(4), 563–574. https://doi.org/10.4314/ahs.v23i4.59
35. Idowu, A., Aremu, A. O., Akanbi, I. M., Eseigbe, G., Adewale, V., Awubite, L., Adebayo, O., Arisa, D., Adetona, B., Olaniyan, A., Olafisoye, E., Olorunshola, O., Eyitayo, J., Ogunlana, O., Aboloye, O., Mayor, A., & Olatunde, E. (2023). Prevalence, pattern and determinants of substance abuse among youths in a rural community of Osun State, Southwest Nigeria. African health sciences, 23(4), 563–574. https://doi.org/10.4314/ahs.v23i4.59
36. Inanlou, M., Bahmani, B., Farhoudian, A., and Rafiee, F. (2020). Addiction Recovery: A Systematized Review. Iranian journal of psychiatry, 15(2), 172–181.
37. Jaguga, F., Kiburi, S. K., Temet, E., Aalsma, M. C., Ott, M. A., Maina, R. W., Wachira, J., Mostert, C., Kosgei, G., Tenge, A., and Atwoli, L. (2024). A scoping review of substance use brief interventions in Africa. PLOS global public health, 4(10), e0003340. https://doi.org/10.1371/journal.pgph.0003340
38. Jatau, A. I., Sha'aban, A., Gulma, K. A., Shitu, Z., Khalid, G. M., Isa, A., Wada, A. S., and Mustapha, M. (2021). The Burden of Drug Abuse in Nigeria: A Scoping Review of Epidemiological Studies and Drug Laws. Public health reviews, 42, 1603960. https://doi.org/10.3389/phrs.2021.1603960
39. Johnson, K., Pinchuk, I., Melgar, M. I. E., Agwogie, M. O., & Salazar Silva, F. (2022). The global movement towards a public health approach to substance use disorders. Annals of Medicine, 54(1), 1797–1808. https://doi.org/10.1080/07853890.2022.2079150
40. Kerker, J. T., and Adeyongo, I. A. (2024). Intervention Strategies for Mitigating Drug and Substance Abuse Among Youths in Selected Local Government Areas of Benue State, Nigeria. African Journal of Humanities and Contemporary Education Research, 14(1), 1-18. https://doi.org/10.62154/2z3gv253
41. Kolawole, T. O., Ogunyemi, A. O., and Lucas, A. R. (2025). Prevalence of substance use and knowledge of its effects among secondary school students in Lagos, Nigeria. The South African journal of psychiatry: SAJP: the journal of the Society of Psychiatrists of South Africa, 31, 2370. https://doi.org/10.4102/sajpsychiatry.v31i0.2370
42. Korah, P. I., Nunbogu, A. M., and Ahmed, A. (2023). Measuring access to health facilities in Ghana: Implications for implementation of health interventions and the Sustainable Development Goal 3. Applied Geography, 158, 103026. https://doi.org/10.1016/j.apgeog.2023.103026
43. Mateu-Mollá, J., Mesas-Fernández, J., and Villanueva-Blasco, V. J. (2026). Psychosocial Interventions for Substance Use Disorder: A Systematic Review of Therapeutic Approaches and Their Clinical Effectiveness. Clinical Psychology and Psychotherapy, 33(2), e70253. https://doi.org/10.1002/cpp.70253
44. McGinty, E. E., and Daumit, G. L. (2020). Integrating Mental Health and Addiction Treatment Into General Medical Care: The Role of Policy. Psychiatric services, 71(11), 1163–1169. https://doi.org/10.1176/appi.ps.202000183
45. Medina, S., Deelen, A. V., Tomaszewski, R., Hager, K., Chen, N., and Palombi, L. (2022). Relentless Stigma: A Qualitative Analysis of a Substance Use Recovery Needs Assessment. Substance Abuse: Research and Treatment, 16, 11782218221097396. https://doi.org/10.1177/11782218221097396
46. Methley, A. M., Campbell, S., Chew-Graham, C., McNally, R., and Cheraghi-Sohi, S. (2014). PICO, PICOS and SPIDER: a comparison study of specificity and sensitivity in three search tools for qualitative

systematic reviews. BMC Health Services Research, 14, 579. https://doi.org/10.1186/s12913-014-0579-0

47. Miake-Lye, I. M., Hempel, S., Shanman, R., and Shekelle, P. (2016). What is an evidence map? Systematic Reviews, 5, 28. https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-016-0204-x
48. Montgomery, L., Fucci, D., Bouraffa, A., Scholz, L., and Maalej, W. Empirical research on requirements quality: a systematic mapping study. Requirements Eng., 27, 183–209 (2022). https://doi.org/10.1007/s00766-021-00367-z
49. Munn, Z., Barker, T. H., Moola, S., Tufanaru, C., Stern, C., McArthur, A., Stephenson, M., and Aromataris, E. (2020). Methodological quality of case series studies: an introduction to the JBI critical appraisal tool. JBI evidence synthesis, 18(10), 2127–2133. https://doi.org/10.11124/JBISRIR-D-19-00099
50. Nelson E. U. (2018). Police crackdowns, structural violence and impact on the well-being of street cannabis users in a Nigerian city. The International journal on drug policy, 54, 114–122. https://doi.org/10.1016/j.drugpo.2018.01.012
51. Nelson, E. U. E. (2023). 'I cannot stop taking weed cos it makes me survive': cannabis use, criminal sanctions and users' experiences in Nigeria. Drugs: Education, Prevention and Policy, 30(2), 196–203. https://doi.org/10.1080/09687637.2021.1972936
52. Nelson, E. U., Akpabio, G., Essien, N., and Obot, I. (2025). Drug problems and treatment services at the community level: findings from a national sample of key informants in Nigeria. Journal of Substance Use, 30(6), 850–856. https://doi.org/10.1080/14659891.2024.2403076
53. Nnam, M. U. (2017). Restorative Justice as A Community Response to Drug/Substance Use: Why Not Adopt This Policy Option in Nigeria? African Journal of Drug and Alcohol Studies, 16(2):128-140
54. Nwagu, E. N., Dibia, S. I., & Odo, A. N. (2017). Socio-cultural norms and roles in the use and abuse of alcohol among members of a rural community in Southeast Nigeria. Health Education Research, 32(5), 423-436. https://doi.org/10.1093/her/cyx058
55. Nwagu, E. N., Ezedum, C. E., and Nwagu, E. K. (2015). The impact of a multiple intelligences teaching approach on a drug education programme on drug refusal skills of Nigerian pupils. Global health promotion, 22(3), 35–44. https://doi.org/10.1177/1757975914547203
56. Ojeahere, M. I., Kiburi, S. K., Agbo, P., Kumar, R., and Jaguga, F. (2022). Telehealth interventions for substance use disorders in low- and middle-income countries: A scoping review. PLOS digital health, 1(11), e0000125. https://doi.org/10.1371/journal.pdig.0000125
57. Ola, B., and Atilola, O. (2017). Validation of CRAFFT for Use in Youth Correctional Institutions in Lagos, Nigeria. The Journal of the American Academy of Psychiatry and the Law, 45(4), 439–446.
58. Olanrewaju, J. A., Hamzat, E. O., Enya, J. I., Udekwu, M. O., Osuoya, Q., Bamidele, R., Feyisike Johnson, O., Johnson, B. S., Olanrewaju, I., & Owolabi, J. O. (2022). An assessment of drug and substance abuse prevalence: a cross-sectional study among undergraduates in selected southwestern universities in Nigeria. The Journal of international medical research, 50(10), 3000605221130039. https://doi.org/10.1177/03000605221130039
59. Olarinde, O. C., Afolayan, J. A., Anayabe, E. E., Adeola, S. R., Bello, I. B., and Danbatta, M. N. (2025). Mitigating Substance Abuse Mortality through Harm Reduction Interventions in Nigeria. Journal of Medicine and Biomedical Research, 24 (2) 117-123.
60. O'Leary, C., Coren, E., Gellen, S., Roberts, A., and Armitage, H. (2025). The effectiveness of psychosocial interventions for reducing problematic substance use, mental ill health, and housing instability in people experiencing homelessness in high-income countries: A systematic review and meta-analysis. Campbell Systematic Reviews, 21, e70019. https://doi.org/10.1002/cl2.70019
61. Oluyemi, J. A., Adejoke, J. A., Olaoluwajubeelo, T., Adekeye, D., Motolani, W. T., Lateefat, O. B., and Gbenga, P. (2019). Substance Abuse and Treatment Among Students in An Institution of Higher Learning in Nigeria. African Journal of Social Work, 9(2): 25-33.
62. Omale, L. E., Viola, J., Stinnette, M., and Olson, B. (2025). Community readiness for harm reduction approaches to drug use: A qualitative Pilot study in Nigeria. Journal of prevention and intervention in the community, 53(2), 252–281. https://doi.org/10.1080/10852352.2025.2484037

63. Omotoso, A. B. O., Makanjuola, A. B., and Abiodun, O. A. (2023). Psychosocial Factors Associated with Substance Use among Secondary School Students in Ilorin, Nigeria. West African journal of medicine, 40(2), 217–226.
64. Onifade, P. O., Somoye, E. B., Ogunwobi, O. O., Ogunwale, A., Akinhanmi, A. O., and Adamson, T. A. (2011). A descriptive survey of types, spread and characteristics of substance abuse treatment centres in Nigeria. Subst Abuse Treat Prev Policy, 6, 25. https://doi.org/10.1186/1747-597X-6-25
65. Onu, J. U., Chinawa, F. C., Nduanya, U. C., Maduka, N. B., Iyidobi, T. O., and Igwe, M. N. (2021). Awareness and acceptance of harm reduction services in a Nigerian psychiatric hospital: Patients' and family caregivers' perspective. Niger J Med., 30:458-63.
66. Onyechi, K. C. N., Eseadi, C., Umoke, P. C. I., Ikechukwu-Ilomuanya, A. B., Otu, M. S., Obidoa, J. C., Agu, F. U., Nwaubani, O. O., Utoh-Ofong, A. N., Ncheke, C. D., and Ugwuozor, F. O. (2017). Effects of a group-focused cognitive behavioral health education program on cigarette smoking in a sample of Nigerian prisoners. Medicine, 96(1), e5158. https://doi.org/10.1097/MD.0000000000005158
67. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ, 372:n71. doi:10.1136/bmj.n71
68. Pérez-Guerrero, E. E., Guillén-Medina, M. R., Márquez-Sandoval, F., Vera-Cruz, J. M., Gallegos-Arreola, M. P., Rico-Méndez, M. A., Aguilar-Velázquez, J. A., and Gutiérrez-Hurtado, I. A. (2024). Methodological and Statistical Considerations for Cross-Sectional, Case-Control, and Cohort Studies. Journal of Clinical Medicine, 13(14), 4005. https://doi.org/10.3390/jcm13144005
69. Peters, M. D. J., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C. and Khalil, H. (2020). Chapter 11: Scoping Reviews (2020 Version). In: Aromataris, E. and Munn, Z. Eds., JBI Manual for Evidence Synthesis, JBI, Adelaide, 6-487. https://doi.org/10.46658/JBIRM-20-01
70. Pridgen, B. E., Bontemps, A. P., Lloyd, A. R., Wagner, W. P., Kay, E. S., Eaton, E. F., and Cropsey, K. L. (2025). U.S. substance use harm reduction efforts: a review of the current state of policy, policy barriers, and recommendations. Harm reduction journal, 22(1), 101. https://doi.org/10.1186/s12954-025-01238-4
71. Rotimi Oguntayo, Aderemi Sunday Opayemi and Johnson Tunde Oyeleke (2022): Socio-contextual factors and adverse childhood experiences as determinants of substance use disorder among individuals between ages 18-40 years in Kano, Nigeria. Journal of Substance Use. DOI: 10.1080/14659891.2022.2157767
72. Rotimi, K., Edeh, F. K., Aiden, J., Itiola, A. J., and Obamiro, K. (2022). Factors that influence pharmacists' efforts in addressing substance use in Nigeria: An exploratory study. Exploratory research in clinical and social pharmacy, 8, 100189. https://doi.org/10.1016/j.rcsop.2022.100189
73. Shaheen, N., Shaheen, A., Ramadan, A., Hefnawy, M. T., Ramadan, A., Ibrahim, I. A., Hassanein, M. E., Ashour, M. E., and Flouty, O. (2023). Appraising systematic reviews: a comprehensive guide to ensuring validity and reliability. Frontiers in research metrics and analytics, 8, 1268045. https://doi.org/10.3389/frma.2023.1268045
74. Shield, K. D., Parry, C., & Rehm, J. (2014). Chronic Diseases and Conditions Related to Alcohol Use. Alcohol Research: Current Reviews, 35(2), 155. https://doi.org/10.35946/arcr.v35.2.06
75. Sizo, A., Lino, A., Rocha, Á., and Reis, L. P. (2025). Defining quality in peer review reports: a scoping review. Knowl Inf Syst., 67, 6413–6460. https://doi.org/10.1007/s10115-025-02435-0
76. Stritzel H. (2022). Peer and Community Influences on Adolescent Substance Use in the Context of Adverse Childhood Experiences. Sociological perspectives: SP: official publication of the Pacific Sociological Association, 65(2), 413–432. https://doi.org/10.1177/07311214211018718
77. Tarela, I., Chiyem, N., Kelvin, A., Mieyebi, I., Evangelyn, A., Peremi, I., and Rukevwe, D. (2025). Victims' experiences of the causes of substance misuse and its crime and parenting nexus in Nigeria: a qualitative study. Cogent Social Sciences. 11. 10.1080/23311886.2025.2582872
78. Tebu, O., Ojule, I., and Chinda, H. (2025). Prevalence and Determinants of Substance use among Students attending Tertiary Institutions in Rivers State, Nigeria. Journal of The Medical Women's Association of Nigeria, 10(1). https://doi.org/10.71526/jmwan.v10i1.68
79. Ugwuoke, K. A., and Ifeanyichukwu, O. (2016). A study of drug use patterns among inmates of Jos prison, Nigeria. African journal of drug and alcohol studies, 15, 11-19.

80. Uzobo, E., Yusuf, R. K., and Scent, G. A. (2024). Faith-based approach in the control of substance abuse: an interventional perspective of Hisbah in Northern Nigeria. African Journal of Alcohol and Drug Abuse, 11(2), 37–52. https://doi.org/10.4314/ajada.v11i1.3
81. Volkow, N. D., and Blanco, C. (2023). Substance use disorders: A comprehensive update of classification, epidemiology, neurobiology, clinical aspects, treatment and prevention. World Psychiatry, 22(2), 203-229. https://doi.org/10.1002/wps.21073
82. Wogen, J., and Restrepo, M. T. (2020). Human Rights, Stigma, and Substance Use. Health and Human Rights, 22(1), 51–60.