Natural Resources for Human Health
eISSN: 2583-1194

Original Research
Received 24 July 2026
Revised 19 Aug 2026
Accepted 03 Sep 2026

Natural Resources for Human Health 2026,Vol.6(21s):1539–1555

KEYWORDS:
substance use disorder, psychosocial factors, social determinants of health, adverse childhood experiences, peer influence, family processes, stigma, recovery, conceptual framework.

Psychosocial Factors in Substance use Disorders: A Structured Narrative Review of Social and Environmental Pathways to Initiation, Persistence, and Recovery

Pan Chunqiu[1], Dr. Shahnaz Sheibani[2]

[1]PhD Scholar, Lincoln University College. Malaysia
Email: chunqiu@lincoln.edu.my, ORCID: 009-0002-4295-2221
[2]Senior Lecturer school of Psychology, Lincoln University College. Malaysia
Email: shahnaz@lincoln.edu.my, ORCID: 0009-0003-4277-5453

ABSTRACT: The objective of this structured narrative review is to synthesize psychosocial and environmental factors related to substance use. We analyzed various types of long term data (e.g. reviews, meta-analyses, and longitudinal data) related to substance use. The evidence map outlines relational (e.g. family members, friends) and social (e.g. community, neighborhood) environments and conditions, as well as individual psychological conditions (e.g. distress, coping) and economic circumstances. We also included other factors "affecting substance use (e.g. stigma, help/treatment access) and substance use recovery. There are consistent patterns in the reviewed studies. For example, evidence from longitudinal studies and reviews of peer substance use suggests that adolescent substance use is related to peer substance use. Studies of adverse childhood experiences and substance use suggest that early life conditions shape substance use later in life. Socioeconomic conditions do not always result in substance use. Reviews suggest that many factors related to substance use, e.g. early life adversity, poverty, and unemployment, are related to the inability to fulfill basic human needs. Reviews of the factors related to substance use suggest that conditions shape peoples' lives in a particular way, and these conditions shape peoples' exposure and vulnerability to substance use. These conditions make some people more vulnerable to substance use, e.g. economic conditions during early life shape an individual's vulnerability to substance use later in life. Using a thematic synthesis approach, we identified strategies to address substance use and reinforce recovery. We support the need for the integration of social and economic conditions in efforts aimed at addressing substance use.

1. INTRODUCTION

Use of a substance may range from occasional to frequent and even to excessive use. When a person exhibits signs of loss of control, continued use despite negative consequences, or adverse effects on social, work, or family life, a substance use disorder exists. Criteria for this condition are similar in both International Classification of Disease and the Diagnostic and Statistical Manual of Mental Disorders (DSM) of American Psychiatric Association. However, discrepancies do occur. These similar criteria for substance use disorders help mental health professionals in areas where no formal system of classification and diagnosis exists. It should be kept in mind that exposure to substance, use of a substance, risky or harmful use of a substance and a substance use disorder are not the same and do not occur simultaneously. There are many factors that affect how a person relates to use of a substance, including type of substance, what stage of life the person is in, how frequently the person is exposed to the substance, etc. (Volkow & Blanco, 2023).

Psychosocial factors are of high importance as how a person relates to a particular substance is affected by several factors, including social context, norms, family, school, work, neighborhood, and the "economy of a region, and how they impact a person's opportunities, stress, and health. A focus on the importance of family, school, and neighborhood, either in a positive or negative manner, has been highlighted in several studies. (Trucco, 2020).

Sensitizing the relevant social conditions encourages the exploration of the contexts in which the members of a group or community interact, both prior to and following initiation. As noted by Lin et al. (2024), in long-term studies, the social determinants of health impact various stages of the lifecycle of substance use disorders (SUDs) including: i) the commencement and progression of SUDs, ii) the use of services associated with treatment and recovery, and iii) various complicating circumstances which may act to negatively impact the recovery process. In regard to substance use disorders, recovery is typically associated with positive changes in employment and/or housing, improved social supports and/or the amelioration of stigma. On the other hand, SUDs may be viewed as the product of the inter-relationships of a number of factors and situations.

Psychosocial factors are conceptualized in this review as a series of related conditions and circumstances rather than as an unconnected cluster of risk factors. Stress and coping, social learning, social determinants of health and ecological systems are integrated. The focus is on the genesis of substance use disorders. The contexts related to the negative consequences associated with the failure to address the disorders are included.

There are three main contributions of the paper. First, the authors construct a framework for understanding addiction that involves all three core components: the induction (or initiation) of the addiction, the maintenance (or persistence) of the addiction, and the recovery from the addiction. Second, the authors incorporate numerous social variables and constructs, such as social modeling and social reinforcement. Third, the authors develop and present a figure depicting a theorized addition framework and review of the pertinent literature.

2. BACKGROUND AND PROBLEM STATEMENT

History and current discourse on addiction has focused on two extremes. These focus on the individual, typically either blaming the person for moral failure or absolving the person from all responsibility by attributing addiction to biology. With regard to substance use disorders (SUDs), it has become apparent that personal, social, and systems factors interact and are essential for understanding the causes of and remedies for addiction. SUDs are complex brain disorders, but the factors impacting vulnerability and the support for recovery are also social and systems factors (Volkow and Blanco, 2023). For several reasons, a social and systems factors frame does not eliminate the role of the individual. In fact, a frame considering social and systems factors gives meaning to the differences individuals encounter based on the supports and resources available to them.

The major drawback of interventions that target only information and/or willpower, or are of a short-term, abstinence-only nature, is that behaviors may return to a higher-risk state. A person may be educated about the health effects of substance use and recognize them as a risk. However, they may still use substances for multiple reasons, including that substance use has been modeled and reinforced by their social network and/or is a learned coping response to distress. Also, they may not be able to stop using substances because they do not have access to treatment, or the treatment is beyond their financial means. Many of the previously described psychosocial risk factors may protect the individual from substance use by acting in the opposite way, i.e. if the individual has access to stable and/or safe social and/or community environments, education, employment, or care, and/or treatment.

Findings related to religious commitment, family, peer group, and social relationships and substance use must be considered in the context of multiple factors, including the sample, measurement, substance used, social values, and cultural context.

3. AIM, OBJECTIVES, AND RESEARCH QUESTIONS

The aim of the research is to construct and validate a conceptual framework based on evidence, that identifies the social and environmental conditions associated with initiation and continued use of substances, as well as recovery from substance use disorders.

The goals are to (1) integrate the body of evidence concerning the types of psychosocial and interpersonal contexts (at the community and structural levels) that may influence SUD development and course, (2) elucidate the pathways through which such contexts may be related to the initiation, escalation, and persistence of SUD as well as engagement in treatment and

recovery, (3) distinguish risk pathways from safeguarding resources, and (4) articulate recommendations for multiple areas (prevention, treatment, policy and research) based on the available evidence.

The paper provides answers to the following questions: (1) What psychosocial and environmental factors are described in the substance-use trajectory review and synthesis publications? (2) How are these factors related to the initiation and the persistence of substance use? (3) What are the effects of protective resources and the availability of treatment on the relationship between risk factors and substance use? (4) What are the limitations of the current body of knowledge? What research should be done in the future? What are the greatest challenges in dealing with social inequity and disadvantage?

4. SCOPE AND KEY DEFINITIONS

Substance use disorder (SUD) describes how a person uses a substance in a manner that results in significant problems and/or distress to the individual and/or others within that person's social environment. Using a substance is not in itself a disorder. The term 'misuse' is descriptive, and if the misuse of a substance is of concern, then the diagnostic criteria for the substance's use disorder should be ascertained in an appropriate validated research framework. One should not assume that all substances that have been used in the recent or distant past, or in any other way been assessed, should be evaluated in the same manner (Volkow & Blanco, 2023).

Psychosocial stress and other factors that are of concern should be determined in a research context, and according to the intention of the research, they may include expectations and self-efficacy, as well as family and social relations, and stigma. Threats may include lack of Social Support. Protective factors are resources that lessen risk. Risk factors do not necessarily mean that an outcome of concern is certain to occur.

Initiation is also known as experimentation, and refers to the first few times a person uses a substance. Escalation is when substance use increases in frequency or it becomes more risky or dangerous. Persistence is continued use or a disorder that is long-lasting, including times when the person experiences consequences of use or tries to manage it. Treatment engagement is the connection or involvement of an individual with a substance use disorder to treatment services. Recovery is described as a reduction in substance use, an improvement in the person's general condition, and the person's ability to reach goals related to improvement or recovery. These changes may occur intermittently (Volkow & Blanco, 2023). Recovery and improvement may be defined as the remission of substance use disorder. Recovery may include improvements in the person's condition, health and wellness. Recovery may involve periods of improvement or remission rather than a single long-term outcome. Recurrence or continuation of disorder may also occur.

5. REVIEW APPROACH AND EVIDENCE BOUNDARIES

A structured search was performed to find peer-reviewed articles (e.g., reviews and studies) concerning the psychosocial and environmental influences and pathways associated with substance use. The search combined terms related to different forms of substance use with terms related to psychosocial and environmental influences and determinants. Database searches were performed using the available records in PubMed and PMC. Other published articles were identified using citation tracking. The searches were done in October 2026. Recent articles were prioritized, and older articles were included only if they added information to the review. Given that several databases could not provide all records, exact search strings, and/or a duplicate record removal log; and that duplicate removal and reviewer screening were not validated by a second reviewer, the authors consider the search process as structured and systematic.

Evidence, in this review, comprised published, peer-reviewed studies and reviews (i.e., systematic and scoping) and longitudinal studies. Evidence focused on the psychosocial and environmental influences on substance use, including reasons for initiation, escalation and/or persistence, as well as substance use interruptions and cessations. Evidence on reasons for substance use resumption was also considered. Non-human studies, editorials, and other research articles without synthesis of evidence and/or first-hand researcher accounts, were not considered. Given the nature of the review and the breadth of substance use, contexts and consequences, evidence was thematically synthesized rather than statistically combined.

Titles, abstracts, and article summaries were screened for relevance, and full text was accessed and screened if available. Relevant information was labeled based on type of publication, population/life-stage, psychosocial domain, stage of the trajectory, study design, and findings and limitations. The synthesis identifies observed associations and the rationale or reasoning thereof, and distinguishes these from associations reported in systematic reviews and meta-analyses. No new effect sizes were reported. Due

to the existing literature searches not including complete export files of the electronic databases searched, totals for duplicates removed, and claims of a search of the entire body of literature are not included in this report.

6. THEORETICAL FOUNDATIONS

6.1 Social learning and social reinforcement

Social learning theory is based on the notion that individuals learn by observing others and are reinforced for their behaviors (Bandura, 1977). This theory is utilized in the field of substance use to investigate learning by observing behavior of others (i.e. family members, peers) who use substances. This theory can help explain substance use behavior if observed family members and peers are involved, if use of substances is normative and social, if social costs are associated with refusing to use substances, and/or if use of substances provides rewards. This theory also can help explain why use is normative. Other review-level evidence also helps identify the context of substance use of family members and peers, as well as social reinforcement (Trucco, 2020).

Not all people will learn and employ new social behaviors. Observed behaviors will be filtered and interpreted based on previous beliefs and experiences, perceived risks, developmental stages, and available sources of reinforcement. A peer group that models drinking will provide opportunities to learn, for example, social behaviors that promote drinking, as well as provide academic tutoring. While a person may benefit from the social behavior and the academic tutoring provided by the peer group, she may reject drinking. Parents may model the use and normalize the use of substances, however, the use of effective parenting practices to set rules and boundaries may alleviate some of the negative consequences of the parental modeling. The processes of both parenting and the peer group will need to be analyzed to provide a holistic understanding of the impact on the child (Loke & Mak, 2013).

6.2 Stress-and-coping perspective

This perspective holds that in evaluating the sources of stress in an individual's life and the variety of demands that she faces, there may be an expectation that substance use is one of many ways to cope with psychological, social, and emotional distress. Negative reinforcement can operate to make the use of substances an ingrained response to the stressful environment. From this perspective, the use of substances may be understood as the result of exposure to a combination of stressful conditions that include, for example, the economic situation of the family, discrimination, aggressive interpersonal relations, and trauma. This perspective can help frame substance use, especially when the motives for use are assessed.

A combination of social factors creates social vulnerability to substance use (Amaro et al., 2021). These factors include the exposure to stress, repeat stressful situations, adversity, unsafe conditions and discrimination. These factors can affect people on a personal, social and community level. This definition identifies the links between the social conditions and the stressful situations, social adversities and inequalities that people experience. These conditions and adversities increase the risk of the use of psychoactive substances. Examples of these conditions and adversities include exposure to violence, unemployment, poverty, discrimination and stigma. Psychoactive substances are used as self-medication to relieve emotional disorders. The exposure to adversities, conditions and stressors can generate psychological and emotional disturbances. These can affect the regulation of the emotions and can facilitate the use of psychoactive substances.

6.3 Ecological systems and social determinants of health

There is great interaction among the systems that comprise the social eco-systems. These include systems within communities (schools, health and social services, employment and justice), as well as systems outside of communities (transportation, housing and neighborhood conditions, employment and social security, social and economic policies, and public services). From a public health perspective, what goes on in one system is often balanced and mirrored by what is occurring in other related systems. Efforts aimed at health promotion and disease prevention within one eco-system (i.e. a school) may be ineffective if other eco-systems (i.e. employment, community social services, etc.) remain unchanged. Likewise, attempts at clinical health promotion and the prevention of substance use are often ineffective when the individual in question returns to an environment where undisturbed social relationships promote the use of psychoactive substances.

Social determinants of health look at how resources, power and opportunities are distributed. They also look at how the social world is organized. Lin et al. (2024) take an ecological and social-determinants perspective in their review of longitudinal studies and consider the role of social determinants of health in each stage of the SUD life cycle, including the beginning, progression

and escalation of SUD, and recovery and mortality. The review reported that positive influences of parental figures and early education within the first stages of the life cycle acted protectively and negatively influenced peer associations and neighborhoods acted riskally. Other influences of health, violence and unemployment acted protectively or riskally within the treatment and escalation stages. Within the U.S., these patterns point to the utility of an integrated multilevel framework. Whether and how the effects are similar outside of the U.S. is not clear.

6.4 Biopsychosocial integration

A biopsychosocial perspective encompasses the entire picture by integrating the domains of biology, psychology and social environment. The combined interplay of various factors including substance specific pharmacology and neuro-adaptation, the individual's social situation, developmental and psychiatric comorbid conditions, behavior, and individual tolerance levels, contribute to the understanding of substance use. Volkow and Blanco (2023) provide an integrative synthesis of various factors by describing the role of neurobiology of reward, cognitive and emotional regulation, and their relevant social contexts in the development of substance use disorders. Social context plays an important role in defining the situations, functions, and cues for using substances, as well as the support and resources available to assist in altering or stopping the use of substances.

Psychosocial and environmental factors reflect the situations in which substance use is learned and reinforced, as well as the resources available to alter use and other options. Social conditions do not singularly determine substance use disorders. This is especially true in refraining from overt judgment. Persons suffering from substance use disorders is not an indictment of their character or morality, nor does it mean that their family/community has failed to provide adequate care and protection. The aim of integrative, multilevel theories and approaches is to bring about preventive actions and care while considering diverse preferences of the concerned individual.

7. PSYCHOSOCIAL AND ENVIRONMENTAL FACTORS

7.1 Adverse childhood experiences and developmental adversity

Neglect and different forms of abuse (emotional, verbal, physical, and/or sexual) and household dysfunction may contribute to childhood adversity. Such experiences may result in the use of various coping mechanisms to deal with the frequent exposure to adverse conditions and stress. If these adversities occur during the developing years, they may lead to the individual's inability to effectively regulate the stress responses and may result in the development of childhood adversity conditions, including the use of substances. A broad body of literature has documented early adversities and the conditions that arise from substance use disorders (SUD). The main limitation of this body of literature is the absence of a standard definition for early adversities and SUD (Leza et al., 2021). A recently completed meta-analysis evaluated a total of 102 studies and reported that exposure to adverse conditions is associated with several conditions related to the use of tobacco, alcohol, and other substances (Zhu et al., 2025).

According to the available scientific evidence, adverse conditions in childhood enhance the likelihood of individuals to develop substance use disorders; however, this should not be misinterpreted in a deterministic manner. A considerable body of knowledge supports the fact that adverse conditions influence individuals differently. Exposure to adverse conditions may lead to substance use disorders through several indirect mechanisms, including anxiety, school and peer-related issues and economic conditions. In one of the recent studies, adverse conditions influenced the quality of the child-mother relationship and the relationship of the child with the peers. While the adverse conditions could not be altered, the scientists have recommended that mechanisms related to the adverse conditions could be addressed (e.g. relationship quality of the child with the mother or the child with the peers).

The simultaneous occurrence and overlap of adversities and the presence of protective factors that occur during and after exposure are also important. For research, the sum total of adverse events can provide an overall prevalence. This said, ACE scores, in themselves, do not comprise a sufficient explanation for the development and/or maintenance of an individual's substance use. However, the integration of a trauma-informed approach in clinical practice should allow the service user to make a decision as to the level of personal disclosure. Such an approach should also be embraced by health and social care professionals involved in the individual's overall care pathway. Trauma-informed care should uphold the service user's right to make an informed decision and ensure that the care provided is of the standard required to safeguard and maintain the service user's wellbeing.

7.2 Family relationships, monitoring, and modelling

Relationships within the family unit can shape a child's experience of both the opportunities and the environments that may contribute to, and amplify, substance use. A range of negative parental behaviors (i.e., substance use, neglect and/or rejection, conflict, and poor supervision) may lead to a loss of protective factors and increase the level of family dysfunction. This may result in a family environment that can normalize and increase the likelihood of a child's exposure to substance use. Positive relationships and sufficient supervision may reinforce the learning and modeling of protective behaviors (Trucco, 2020; Vakalahi, 2001).

Family impact means more than control by parents. Repeated strict and extreme punishment and public humiliation can drive a young person to hide their problems and addiction. The best, most effective control, is to provide boundaries, combined with understanding and responsive care. There is no family structure that immediately equates to family dysfunction. A single-parent family, blended family, extended family, or family under foster care placement can be safe and stable, and can provide love, care, and adequate supervision for a young person. Those families can function as effectively as the average family. Risk to a young person can be better determined by assessing the presence of substance use and the availability of support, care, and safe supervision in the family. Other family members can help address family conflict and improve family functioning.

In the case of adults, some family members can support and facilitate treatment. Other family members can be disruptive and can provide an excusable reason to not work a recovery program. The treatment of a family member can help improve the recovery of the whole family and vice versa. Family involvement needs to be voluntary and safety-focused. Many family members want to improve the situation of their family member who has the problem. It is the responsibility of the treatment program to determine family member involvement.

7.3 Peer networks and perceived norms

Individuals learn substance use behaviors through the offers and examples of substance use by their peers. Behavior is also learned through participation in substance use activities. Individual perceptions of group norms and social acceptability shape behavior. A distinctions should be made between the actual behavior of a peer group and an individual's perception of that behavior. It is also possible for an individual to overestimate substance use by his or her peers and change his or her behavior as a result. Peer group behavior can and will influence a persons' behavior. It should be noted that a peer group can influence behavior in multiple directions.

Trucco (2020) identifies both parents and peers as significant influences on adolescent substance use. Offers to use substances by peers were considered direct influences. Indirect influences were perceived peer acceptance and parental controls on substance use. Peer group influences can be protective as well. This is evident in peer groups that motivate and reinforce substance use avoidance. "Friends" can also be a source of social support in efforts to help a peer seek and engage in treatment for substance use. It is ineffective to implement a peer intervention that simply warns against the negative consequences of "peers" if other substance-free activities are not offered.

The processes that lead to peer group substance use may vary based on developmental stage. Substance use in university students may occur in various peer groups such as those in residential or professional settings. For working adults, substance use may occur in the workplace. Those in treatment may also experience substance use peer groups and/or be part of support groups. Online peer groups may have norms and standards related to substance use. The effects of such groups, however, should be studied considering the characteristics of various online platforms, and based on the behaviors and interactions of members of the groups.

7.4 Self-esteem, identity, and psychological distress

Self-esteem is the value that an individual places on himself or herself. Self-esteem may lead to the use of substances in a number of ways. Using substances to alleviate feelings of anxiety and/or shame may increase an individual's confidence to participate in social interactions where substances are used. There is, however, no direct cause and effect relationship between low self-esteem and substance use. Undesirable effects of substance use may lead to an individual's self-esteem being undermined through the loss of relationships, employment and/or educational attainment, and other negative consequences. Therefore, a causal relationship between low self-esteem and substance use may not always be evident.

The examination of self-esteem and religiosity should also consider the sample's representativeness, the assessment tools, the nature of the constructs of interest, and the analysis. Screening and diagnosis are not equivalent. Relations documented in a given point in time are insufficient to affirm the nature of the relation, let alone the temporal order. Furthermore, self-esteem is often measured as an independent variable in the context of substance use. This, however, should not be the case. Self-esteem is a complex concept that should be studied and measured in the context of other related concepts (i.e. coping and self-control motives, depression and anxiety, interpersonal relations, adverse events, and socioeconomic status).

Psychological distress is often associated with adversity, substance use and SUDs. It can also represent a condition for which an individual uses substances. Anxiety and depression can increase the attraction of using substances. Furthermore, SUDs can exacerbate anxiety and depression and disrupt an individual's psychological wellbeing and healthy lifestyle. Volkow and Blanco (2023) explain that stress and adverse events can disrupt the reward system and increase the appeal of substances to an individual. Clinicians should not automatically consider that psychological distress and SUDs are always interrelated and that psychological distress is always SUDs-related.

7.5 Religiosity, spirituality, and meaning

Participating in religious activities can give people social, cultural and recreational activities, as well as provide them with social and moral guides. Religious practices, social support, and their local social norms may shape a person's decision to use substances. Believing in a religion and/or participating in its activities does not necessarily provide social support, and social support can be given in several other ways. In the absence of research-based evidence, care should not be generalized, i.e. the relationship between religiosity and substance use should not be assumed and extrapolated to other religions or population subgroups.

Given the variables in the model (e.g., social support, community norms, beliefs and engagement with the faith community), and the fact that religious engagement may be a source of social norms and practical resources, religious participation may be useful in preventing or alleviating a condition. However, this may create a false sense of security and may even worsen the situation, e.g. through social stigmatization, if the participant community is not receptive. Spirituality should be integrated in to a treatment plan in the form of ancillary services, especially if stipulated by the service user.

7.6 Socioeconomic disadvantage, education, and employment

Stress is usually chronic and extreme when there are inadequate financial and material resources. Useful resources include transport, childcare, and food, as well as access to opportunities for healthy recreational activities. Jobless persons often have unstable circumstances and anxiety about an uncertain future because they no longer have a regular schedule, social contact, and income through employment. The type and extent of workplace culture-related resources and stress differ. Some workers experience mental and physical stress and injury because of their employment. Long employment-related hours, stress, and exposure to workplace cultures that accept and normalize the use of alcohol and other substances can detrimentally affect an employee's health and increase the risk of using substances. Conversely, the stress of a job can give employees a sense of purpose and provide them with the structure of a regular schedule and contact with the community. Positive employment can protect against substance misuse, and unemployment can place individuals at risk for substance misuse.

Stephenson et al (2024), examine the socio-economic factors, as well as the psychosocial factors, related to substance misuse in the literature they analyzed. Lin et al (2024) identify employment as an essential aspect of treatment and recovery in the researched literature. Employment-related resources, like stable jobs, safe and secure housing, transportation, and child care, alongside a motivated individual, can help decrease relapses. The absence of these resources can increase relapses, and make previously planned treatments unmanageable.

School and other educational settings provide social contacts and support and help children develop a sense of agency and structure in their lives. They can provide protective factors, particularly school connectedness and early education. There are risks that repeated school moves, school exclusion and other disruptions to schooling can lead to disconnection, but this requires further investigation. There are other ways to address the issues children face as a result of disconnection, such as the creation and maintenance of a safe and supportive school environment.

7.7 Neighbourhood conditions, availability, and social cohesion

There are many features of the environment that impact the range of opportunities available to young people, the risks to which they are exposed and the level of daily stress they experience. These may include the availability of substances, levels of social concern (for example, physical and social infrastructure, public safety, transport, employment, community, recreational facilities and health services), as well as social cohesion in the community. When substance use is accepted by the community, or is openly practiced, it may increase the opportunities for young people to use substances. The same may be true of other forms of unacceptable and stressful community conditions. However, the presence of concerned and available community members and institutions, including recreational and social facilities, may be protective.

Ambero et al (2021) identify environments with high levels of interpersonal stress and/or discrimination, as well as exposure to threats of physical violence, as contributors to social vulnerability. Lin et al (2024) identified neighborhoods with high levels of instability and vulnerability as contributing factors to participants' substance use trajectories in their reviewed studies. Because individuals do not randomly associate with places, identifying neighborhood effects is difficult. Distinguishing context effects from composition effects is an important concern for researchers. It is also important to refrain from attributing negative characteristics to neighborhoods and/or residents. It is important for policymakers to make improvements to neighborhoods, including the availability of positive social and economic opportunities and services, and to discontinue negative assumptions about neighborhoods.

7.8 Discrimination, stigma, and criminalisation

Stigmatizing and discrimination based on prejudice may lead to social exclusion and contribute to substance use and recovery issues. People may refrain from treatment, because they are fearful of being labeled as irresponsible, threatening or morally reprehensible. Amaro et al. (2021) argued that discrimination and racism create and reinforce social vulnerability and, Volkow and Blanco (2023) argue that stigma and criminalization contribute to the negative consequences of substance use disorders and recovery and may obstruct the desire and willingness to seek help and care.

Criminal-justice contacts lead to multiple barriers including, but not limited to, prison time, loss of employment, separation from family and unplanned breaks in treatment. Lin et al. (2024) note the importance of criminal-justice contact to treatment and recovery in the studies they reviewed. These relationships cannot be explained by the individual's behavior. Relationships of this type must be analyzed at the policy level. From a public-health approach, the objective is to provide treatment and recovery, and in the interim, reduce the negative consequences of the individual's behavior and provide ongoing care. This can be accomplished without the need to embarrass or exclude the individual.

There is more to stigma reduction than changing what words are used to describe individuals. Stigma reduction requires changes in the environment. Staff training, and respectful, understandable, and available services are essential. The objective of the public messages should be to provide families and the community with an accurate understanding of the diagnosis and treatment of SUDs. The treatment of stigma should be researched in a similar manner as described.

7.9 Housing instability and social isolation

Having a safe and secure place to live is important for a person's physical and mental health and recovery. A safe place provides the privacy, peace and security needed to recover. While housing and social stability facilitate recovery, instability negatively impacts the recovery process and may even increase the risk of relapse. Social isolation may negatively affect a person's ability to attend appointments and make recovery-related activities part of their daily routine. Supportive relationships facilitate the recovery process. While social relationships affect the recovery process and the conditions under which recovery is attained, the opposite may also be true. Housing instability and relationship instability affect the conditions under which recovery is attempted.

Unstable housing and social relationships may have an important impact on the development of substance use disorders and help to explain long-term changes observed in reviewed longitudinal studies. Recovery housing projects focus on the recovery process by incorporating stable living environments and Support. Research has shown that the presence and the extent to which the recovery process is incorporated in housing projects, is positively associated with the recovery process. Housing stability and security facilitate the recovery process and may also be used as part of a clinical support system.

7.10 Substance availability, marketing, and wider policy

Individual choices are made within markets and regulatory frameworks. Price and the legality of substances impact their availability, as do the strength of the products, marketers, prescribers, and enforcers, and psychosocial factors and local mores. Availability can transform interest into the ability to access something. Vulnerability combined with situational opportunities can determine risk-taking and the likelihood that negative consequences will occur. Markets, norms, and policies are not always consistent or equitable. Policies that change availability and increase risk reduce use and shift problems in treatment. This should be done considering possible alternative negative consequences.

According to Volkow and Blanco (2023), external factors such as the social climate, the social norm, the legality of substances, and the external environment contribute to the vulnerability of individuals. Thus, it is appropriate to include external factors and environments in the psychosocial framework. The external environment contributes to the negative consequences associated with the use of substances, and it sets the normalcy and availability of the use and the resources to address the consequences. Policies should address specific substances and be informed by the best evidence. Prevention policies, for example, should consider possible negative consequences of displacement into more dangerous markets.

8. FROM INITIATION TO PERSISTENCE: INTEGRATED MECHANISMS

The mechanisms associated with initiation incorporate an interplay of factors including exposure, opportunity, and social context. Positive models can facilitate initiation, and perceived norms can diminish concern regarding potential risk and/or novelty of substance use. Use can offer social and/or other rewards. However, initiation cannot occur in the absence of exposure and opportunity. In the presence of protective factors, social and/or other rewards, initiation becomes less likely. Therefore, while exposure to negative social situations can increase the likelihood of substance use initiation, it does not guarantee it.

Compelling evidence suggests that persistence can be attributed to reinforcement, conditioning, and/or repetitive learning. Emotions and learned responses can be associated with particular individuals, locations and/or social situations. These learned responses can persist even after the social situations that triggered them are no longer present. Conditioning and learned responses can also play a role in the development of substance use disorders. Furthermore, while social situations can shape an individual's responses and reinforce use of substances, Neuroadaptation can make the use of substances, and the control to stop using them, even more difficult.

There are a number of processes that can combine to help explain the persistence of problematic substance use. Use may be employed to help manage withdrawal or psychological distress, and help maintain social networks. Use may also help manage the consequences of substance use (e.g. loss of a job, relationship or housing). Employment can help provide a regular income and structure to a person's life. Stigma associated with problem substance use may help explain why some people do not seek help for their substance use problems. The breaking down of social support (e.g. the losing of family members) can help create situational risks, and increase a person's exposure to criminal environments. Effective and relevant interventions should be tailored to the individual.

Other "protective" factors may help explain why some people are less at risk of problematic substance use. These may include employment or education. Treatment may help address some of the psychological issues associated with problem substance use. It may help to modify some of the consequences of problem substance use (e.g. withdrawal and behavioral issues). Members of the community may help provide social support, or help modify the person's social role. There is a need to ensure that the protective factors offered to a person are appropriate and relevant to the person.

9. PROPOSED CONCEPTUAL FRAMEWORK

Figure 1: Illustration of multi-level pathways of psychosocial and environmental influences associated with substance use disorders (SUD) across various stages and levels. The pathways consist of (1) structural/macro level; (2) environmental/social; (3) individual psychosocial; (4) sequence of events and/or resultant outcome; and (5) protective/buffering processes and/or self-reinforcing mechanisms. Empirical data can substantiate relationships described by the pathways depicted by the lines. These pathways do not establish or imply cause and effect relationships described in the current paper.

Natural Resources for Human Health
eISSN: 2583-1194

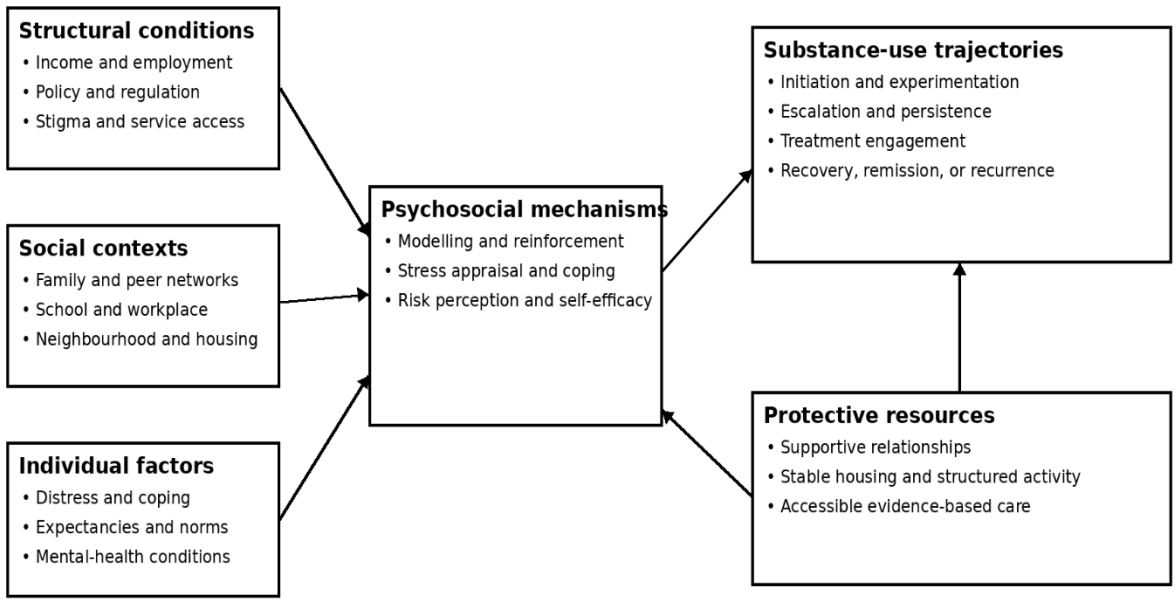

Figure 1. Conceptual framework linking structural, interpersonal, environmental, and individual psychosocial pathways to substance-use trajectories.

The description of elements of the framework encompass conditions and circumstances at the structural and macro levels (e.g. unemployment, employment conditions, economic policies, disparity, social inequalities, stigma and discrimination, 'supply' and 'demand' of legal and illicit substances, availability of substance use and other health and social services, family and other relationships, conditions of schools and workplaces, communities, and neighborhoods). The individual psychosocial processes (e.g. stressful events, trauma and related experiences, social norms, self-regulatory motivation, expectations and beliefs, self-control, co-morbidity) described in the framework are postulated to modify and/or mediate effect of context and conditions described at higher levels to substance use outcomes.

The differences among the stages are evident between the initiation and experimentation stages and the subsequent stages of the pathway, including, for example, patterns of use, treatment engagement, recurrence and recovery. Not all people will progress to the more advanced stages of the pathway. The model allows for different pathways, including nested pathways. Different pathways may depend on the presence of protective factors and may be influenced by feedback from the context. A number of situations may be applicable to the pathway. Stigma, for example, may work to block (or negatively correlate with) treatment engagement. The influence of family conflict may be positively correlated with (and thereby may increase) the level of adolescent distress. However, in other situations, family conflict may be negatively correlated with (and therefore may reduce) adolescent distress, if, for example, a relative provided supportive care to the adolescent.

Positive relationships with parents, a caring school personnel, stable living situation, employment, education, treatment, caring community members and services may act to prevent (i.e., buffer the impact of) adverse outcomes associated with substance use. The same protective factor may be positively correlated with (and hence reduce) adverse impacts of substance use, and may be negatively correlated with (and therefore increase) adverse outcomes, if it is provided coercively.

10. SYNTHESIS OF EVIDENCE AND CRITICAL ASSESSMENT

10.1 Overview of the evidence base

The reviewed and synthesized literature predominantly supports multilevel accounts of substance use trajectories. Different levels in these accounts include: family and/or peer relationships; developmental adversity and/or distress; social and/or economic disadvantage; neighbourhoods; and accessibility to services. Literature in these areas varies from systematic reviews and/or meta-analyses, to less structured observational studies. An association in the literature does not prove a cause. Findings

concerning the initiation of substance use by adolescents cannot be extrapolated to describe the substance use trajectories of adults, including substance use cessation and/or recovery (Lin et al., 2024; Trucco, 2020; Volkow & Blanco, 2023).

Table 1. Evidence map of selected sources informing the narrative synthesis.

Source / evidence type	Coverage / design	Evidence reported in the source	Interpretive limit for this paper
Zhu et al. (2025) — meta-analysis	102 studies; N = 901,864; ACEs and substance-use outcomes	Reported associations between ACEs and smoking, problematic/heavy alcohol use, illicit drug use, and cannabis use.	Outcomes and ACE definitions vary; pooled associations do not establish that adversity inevitably causes SUD.
Watts et al. (2024) — systematic review and meta-analysis	27 longitudinal studies; 99 effect sizes; adolescents aged 10–19	Peer influence estimate: mean standardised beta = .147, $p < .001$; estimates varied across substances and peer-use measures.	Adolescent findings do not automatically generalise to adults, persistence, or recovery; residual confounding remains possible.
Rodríguez-Ruiz and Espejo-Siles (2025) — systematic scoping review	Review of moderators of associations between peers' and adolescents' substance use	Examined individual, family, school, peer, and community moderators of peer-related associations.	A scoping review maps evidence and does not itself establish a single causal moderator.
Lin et al. (2024) — scoping review of longitudinal studies	Social determinants across the SUD life course	Identified evidence concerning childhood family, school and community contexts, social networks, employment, and criminal-justice involvement.	The review emphasises U.S.-based evidence; transfer to other legal, cultural, and service contexts requires caution.
Leza et al. (2021) — scoping review	Adverse childhood experiences and SUD	Mapped literature connecting ACE exposure with later substance-related problems.	Scoping review findings depend on included study designs and definitions; not a pooled causal estimate.
Grummitt et al. (2021) — systematic review	Intervention targets for young people exposed to childhood adversity	Identified individual and interpersonal targets, including peer and parent–child relationship processes.	Evidence is specific to young people exposed to adversity and should not be treated as universal evidence for all SUD populations.
Vilsaint et al. (2025) — systematic review	Recovery housing; eligible experimental and quasi-experimental reports	Reviewed recovery-housing outcome studies, including abstinence and social outcomes such as income and employment.	Findings concern specific recovery-housing models and study populations; they do not establish equivalent effects for all housing interventions.
Trucco (2020) — narrative review	Psychosocial factors associated with adolescent substance use	Synthesised evidence on parental, peer, school, and neighbourhood contexts.	Narrative synthesis is useful for theory and domain mapping but is not equivalent to a new pooled estimate.

Source / evidence type	Coverage / design	Evidence reported in the source	Interpretive limit for this paper
Amaro et al. (2021) — conceptual/review synthesis	Social vulnerability, stressors, discrimination, and environmental conditions	Frames vulnerability across individual, interpersonal, community, and societal levels.	Provides a multilevel interpretation; claims should not be read as a single quantified causal effect.
Stephenson et al. (2024) — national-perspective review	Socioeconomic and psychosocial determinants of substance misuse	Discusses socioeconomic conditions and psychosocial correlates in a national context.	National context and review scope constrain generalisation across countries and populations.

Evidence sources are described according to synthesis level and type of interpretation. Conceptual interpretation may include, but is not limited to, author opinions and assumptions. Scope limits are described in the discussion. The evidence map presents select sources of evidence. Numerical results are reported verbatim. No pooled analyses were done.

10.2 Childhood adversity and cumulative vulnerability

Early adversity has been linked to the development of later problematic use of various substances. The association has been examined in the context of a range of adverse experiences. Zhu et al (2025) performed a meta-analysis and found that ACEs are associated with the use of alcohol and other drugs. Other reviews have also synthesized the body of evidence on ACEs and substance-related issues (Leza et al., 2021). The body of evidence supports that early adversity may be associated with the development of problematic use of various substances and that treating adversity as a risk factor is appropriate. It is inappropriate to conclude that the effects of adversity are the same across all substances or that individuals who experience adversity are destined to develop problematic use of substances. Comparing individuals who experience adversity and substance use is made difficult by the effects of adversity. It is important to assess the individual's experience of adversity while also taking into account protective factors, positive relationships and later opportunities. (Grummitt et al., 2021; Leza et al., 2021; Zhu et al., 2025).

10.3 Family and peer processes

Processes within the family and peer groups are among the most commonly identified psychosocial processes through adolescence. It is an over-simplification to examine the effect of the family on an adolescent through the lens of family structure only. Processes such as access, supervision, conflict, and communication can affect adolescent outcomes (Loke & Mak, 2013; Vakalahi, 2001). Peer processes can also be examined longitudinally. Findings from a longitudinal meta-analysis of 27 studies provided evidence to suggest that the use of substances by a peer can influence substance use by an individual (mean standardized beta = .147, $p < .001$) (Watts et al., 2024). Individual, family, school, peer, and community processes can moderate the influence of a peer on the use of a substance by an individual (Rodríguez-Ruiz & Espejo-Siles, 2025). Peer influence may also be explained by peer similarity. Designs that do not take into account other processes are likely to overstate the influence of peers on the behaviors of individuals.

10.4 Social determinants and environmental conditions

In this part of the analysis, the focus extends beyond proximal relationships. Longitudinal data synthesized by Lin et al. (2024) revealed the importance of family, school, and community (including peer groups) across the life-course of individuals with SUD. Employment, and involvement with the criminal justice system (including incarceration) were also noted. Social vulnerability is contextualized by exposure to stress and/or discrimination, and ethnic/racial inequalities (Amaro et al., 2021). Stephenson et al. (2024) noted the psychosocial and socioeconomic determinants of substance misuse and its overlap with other conditions. There is a case for considering the role of employment, housing and neighborhoods (including safety and discrimination) as potential determinants. Amaro et al. (2021) and Lin et al. (2024) suggest that the reverse may also be true, and that some of the conditions described (e.g. unemployment, homelessness) may function to reduce social and economic vulnerability by, for example, increasing stress and limiting the opportunity to seek treatment. It is beyond the scope of the available evidence to disentangle these relationships.

10.5 Psychological processes, protection, and recovery

How individuals experience and respond to social conditions is typically described using psychological variables, including distress and coping. The use of psychological variables to understand behavior in the context of health is not restricted to the individual and should be placed in social and material environment. Self-esteem and religiosity are examples of psychological variables that may be associated with protection or risk. The evidence suggests that there is a need to examine the context of the study and how the variables were assessed. Other things being equal, a combination of social and individual interventions to improve self-esteem, and social support, combined with other structured activities, education, care and work may help reduce the need for a substance-related structure in people's lives, but the quality of the support and integration matters. There is significant risk of selection bias when evaluating evidence for recovery of substance dependence. The recovery housing system has been systematically reviewed. Findings from specific recovery systems and services should not be generalized to other systems and clientele. (Vilsaint et al., 2025)

10.6 Critical appraisal of methodological limitations

Studies throughout the evidence base have methodological limitations. In this review we have focused on three of the most common. First, various definitions of the concept of 'exposure' or 'outcome' make comparison of findings difficult. For example, 'substance use' may reflect experimentation, frequency or risk of use, a positive screening test, or an alcohol use disorder. Second, residual confounding and other types of selection bias may distort true relationships. Peer influence or friendship may lead to homogeneity of the group. So may similarity of the neighborhood or other environments. Neighborhoods may also differ in the services available to the community. Third, in a cross-sectional study it may not be possible to determine the true direction of relationship (i.e. casual relationship) between the variables of interest. While systematic reviews and meta-analyses may address some of the issues of methodological limitations, they are bound by the same constraints of the original studies. (Lin et al., 2024; Trucco, 2020; Watts et al., 2024; Zhu et al., 2025).

10.7 Integrated interpretation

Psychosocial and environmental factors affect SUDs in various ways. There is limited evidence regarding mechanism and direction. Structural factors, social and psychological processes, and clinical and social resources, in combination, shape experience and exposure to risk, as well as available protective factors. Balance and integration of these factors can affect individual's pathway to positive outcomes and recovery. Protective factors are generally regarded as buffers to risk; however, in some instances, protective factors may actually increase risk. This interpretation considers the biopsychosocial and ecological perspective. The aim of this interpretation, however, is to synthesize the evidence within the framework rather than test the framework and/or draw causal inference. The available evidence does not justify universal ranking of risk factors. Likewise, there is little basis to support the assumption that a given intervention would have positive impact across the various populations and SUDs. Additional evidence, as outlined by Amaro et al. (2021) and Volkow and Blanco (2023), is required to test the causal pathway and assess the impact of interventions.

11. IMPLICATIONS FOR PREVENTION AND INTERVENTION

11.1 Prevention across developmental stages

The evidence summarized by Grummitt et al. (2021) highlights adversity as a risk factor for SUDs and suggests various pathways (e.g. individual, relational, and social) through which prevention may be directed. Prevention of harmful use of alcohol and other drugs by young people is required at multiple levels and should not be limited to education about substances. It should incorporate child and adolescent mental health, social and emotional, and community engagement and support. Effective prevention should avoid advocating that exposure to adversity will result in the development of SUDs. Rather, it should focus on the development of positive relationships and strengthening of individuals.

Responding to offers and identifying and responding to social pressure are skills to build for peer-focused prevention. Peer-focused prevention requires moving beyond stereotyping all peers as dangerous and developing education to challenge perceived norms and report normative behaviours. Programs need to focus on both individual and social influences. Schools and universities need to provide programs and policies to build belonging without requiring the use of alcohol and other drugs. Self-esteem, religiosity, and gender have all been researched as preventive factors. However, prevention should not be limited to these factors. Prevention programs and activities need to be individualized based on the needs and behaviors of the person.

11.2 Family-centred approaches

Family-focused prevention strategies aim to improve communication and increase parental supervision. Programs need to be developed to address the individual needs of a family based on the age of the children in the family. Caregivers need to be provided with information on how to effectively set limits and how to manage the caregiver's own stress and emotional needs so that caregivers are best able to set and manage limits for children and youth. Family interventions are often directed at caregivers, but should also address the needs and resources of the family.

In the absence of reliable and safe relationships, prevention activities to reduce youth exposure to risk are justified and should be the primary focus of prevention activities, rather than assigning blame to the caregivers. Family-focused prevention is primarily directed at caregivers. However, realistic and practical prevention activities, policies and programs to strengthen relationships of care and supervision should be the foundation of prevention activities for families.

11.3 Integrated mental-health and substance-use care

Public mental health assessment involves consideration of various factors including: person's use of substances, level of distress, exposure to trauma, social and community supports (including housing and employment), exposure to interpersonal violence and accessible mental health supports and services. Mental health symptoms may occur before, after, or with substance use symptoms and integrated services are necessary. Co-existing mental health conditions with substance use disorder (SUD) should be assessed in detail and severity should be considered when developing a service plan (Volkow and Blanco, 2023). Other aspects of the plan should include use of evidence-based mental health services and supports. Services, interventions, and supports should be based on best available evidence (Holtzmann et al, 2017).

Some interventions may help reduce psychiatric symptoms, and while this should be encouraged, other potentially more effective interventions should not be delayed. It should also be acknowledged that psychiatric symptoms may recur for multiple reasons and relapse should not be attributed solely to lack of patient motivation. Among other things, psychiatric symptoms may recur due to insufficient address of withdrawal symptoms, access to safe and adequate housing, social supports, safe and adequate treatment, and other personal safety concerns. Continuity of care is important, as a number of different and unrelated service systems and providers may be involved in the care of the same individual.

11.4 Housing, employment, and social support

Barriers to practicality can impact the usability of clinical services. Barriers to securing safe and stable housing, for example, can leave an individual vulnerable to premature death, while employment, educational, and peer-based services can help meet the individual's need for economic, social and psychological well-being. Lin et al. (2024) reported that employment and social supports were positive and related to treatment participation and the individual's recovery; lack of stable and adequate housing was reported negatively. Overall, the available evidence supports the need for integrated services.

Different supports are necessary based on the individual's recovery goals. The recovery support may focus on changing the individual's risk to uncertainty and instability, improving the individual's overall health, stabilizing housing, or gaining access to treatment. Various services may be available to the individual; however, the individual may not be aware of all services. Services may also have unfounded and unclear assumptions about the individual. There is a need for assessment of the individual's goals and what is most important to the individual, and what is most beneficial to the individual from the service's perspective.

11.5 Stigma reduction and policy

Stigma reduction in the context of health and employment is the responsibility of the health service, employer, and/or landlord. Health services can adopt training and evidence-based practices to improve the care offered to people with SUDs, and remove unnecessary barriers to care. People in the criminal justice system deserve the opportunity to access treatment. The implications of the interaction of criminal justice and health systems on the prevention and treatment of SUDs should be examined. Volkow and Blanco (2023) are in agreement. Health and social policy should be examined to eliminate unnecessary barriers to treatment and replace barriers that increase criminalisation.

Where there are commercial and/or supply influences on the use of alcohol and other drugs, especially where restrictions on availability negatively impact on the ability to access health and social services, policies should ensure supply and availability. Respectively, prices, marketing, and prescribing policies should be formulated with the objective of addressing adverse

consequences and maintaining the health and public welfare. It is likely that enforcement policies to reduce the availability of alcohol and other drugs will fail, largely because of social factors (e.g. unemployment), clinical (e.g. withdrawal) and structural factors (e.g. poverty) that contribute to the use of alcohol and other drugs. Police, health, employment, education, housing and social services should work collaboratively to address alcohol and other drug issues.

12. IMPLICATIONS FOR RESEARCH AND MEASUREMENT

Precision is important when developing outcome definitions. "Substance use" may denote use frequency, quantity, heavy episodic use, hazardous use, an elevated screening score, use associated with a harmful or assessed as dependent pattern, or substance use disorder (SUD). Defining outcomes with insufficient precision may give the impression of conflicting findings. Research studies should report the type of substances used, the timeframe of use, the developmental stage of the study population, the setting of the research, and the diagnostic or measurement criteria. Research studies should report the purpose of the screening instrument and should not interpret a screening score in a diagnosis or other conclusory statements about a research participant.

Longitudinal studies may help determine the course of use, recovery, and other outcome transitions. Because of the recursive nature of the stress and substance use relationship, cross-sectional studies may help determine the relationship. Research studies should report the use of other design strategies to assess the relationship of stress and other outcome changes. Because of the reciprocal nature of the relationship of stress and substance use, research studies may explore the importance of policy changes on the availability and use of services. Mixed methods research may help address the important role of lived experience to explain research findings.

Researchers must consider measurement at several different levels. Individual-level measurement may include feelings of distress and other substance-related symptoms, as well as interpersonal and intrapersonal factors such as coping motives, expectancies, and self-efficacy. Measurement may occur at the interpersonal level with respect to relationships and social networks, and at the community level with regard to the built and social environment (e.g., service availability, neighborhood safety and stability). Structural measurement may consider legal and social policy (e.g., stigma and discrimination). Researchers should control for context in which the participant operates (e.g. family, work, school, community), and take clustering into account.

With regard to research design, major concerns are generally confounding and selection. For instance, peer similarity may be attributable to selection, influence, or both.

Studies that measure the same participants over many years struggle with attrition, and this may be related to the instability and/or the severity of participants' housing situations. Researchers should describe their missing data. They should account for measurement invariance. They should not Artificially restrict the range of possible values of a variable. And they should state the causal models that they intend to test. They should also describe the time-based conditions for examining mediation. And they should state the hypothesized conditions for examining moderation. The hypothesized conditions must be accounted for by the data.

Cultural validity should also be addressed. When using constructs, like the family's religious involvement, stigma, and/or an individual's self-esteem, researchers should address the meaning that the constructs may have within various cultures and/or languages. It may be necessary to adapt or modify instruments in order to evaluate the concepts that are meaningful and important to various cultures and/or languages. Researchers should not oversimplify. Reporting sex, gender and/or other demographic data may help scientists better understand the social factors that underlie participants' experiences.

13. CONTEXTUAL DIFFERENCES, GENDER, AND CULTURAL INTERPRETATION

Psychosocial pathways should not be assumed to be context-independent across gender, age, culture, and substance use. Variations in the social context make some substances more or less salient, dictate the acceptable ways of using substances, and/or affect the safety and/or reputation costs for users seeking help. Social expectations and norms around gender may influence how and in what contexts a person uses substances. They may also impact the role a person plays in caregiving, a person's exposure to violence and harassment, the consequences of help-seeking and/or being identified as a person with a substance use disorder. While social mechanisms should be explained, gender should not be assumed a priori to increase risk. Observed differences in the prevalence of substance use disorders across populations should be researched. Demographic

differences should not be assumed to explain phenomena they seek to study. Differences in substance use and related disorders may be the result of differences in social and economic conditions, social norms, and the availability of care.

Cultural values influence the expression of family obligation, religious practice, social acceptance, shame, and recovery. In some cases, family connections are the only source of reliable support. For other people, the need to enlist family support creates a major emotional and social risk. In still other situations, community members may offer social and physical support to help people recover, but may gossip, ostracize, and socially abuse people to try to regain" lost social control. The most important obligation in a person's life may be of a familial or religious nature. Culturally responsive assessments of the meanings attached to these relationships by people from different cultural contexts are necessary. For researcher and clinician reflexivity, the importance of a familial relationship or a religious practice may be first labeled and then assigned a culturally contextualized meaning.

It is important to identify and take into account the local differences when making international comparisons. Systems of law, substance production and consumption, the health and social welfare structures and services, and attitudes towards families vary over time and from country to country. The long-term studies conducted in different parts of the world, and reviewed by Lin et al. (2024), provide insights into the typical life-course patterns of people and the barriers to well-being. Those studies, however, do not address the need to undertake locally-relevant research. Findings from high-income countries may not be applicable to low- and middle-income countries where the majority of the world's population live and where substance use and other behaviors are heavily criminalized.

14. LIMITATIONS

Due to differences in the populations, substances, exposure definitions, outcome measures, follow up, and analysis, the evidence varies. Reviewers are constrained to the limits of the primary studies. The thematic synthesis does not generate new effect sizes. Effect size combination and integration are beyond the scope of this study. The thematic synthesis and associated conclusions are constrained to the evidence base.

The goal of the study was to synthesize existing evidence regarding the multilevel pathways associated with substance use disorder. The evidence base is the primary constraint to the conclusions drawn. The framework is contextual and does not advocate for specific mechanisms. The goals and hypotheses derive from the research question, and the constraints reflect the targeted nature of the research.

15. CONCLUSION

Multiple and interrelated psychosocial and environmental risk factors shape the initiation and the subsequent use of various substances. These factors alter the use and include peer influences and social norms; adverse and stressful life experiences; the availability of social and economic resources; discriminatory, stigmatizing conditions in the community; and the availability of treatment for substance-related conditions. These factors can influence coping and strengthen resilience in substance-related outcomes. Shaping and transforming multiple factors can influence an individual's liability to an SUD, and exposure to risk does not preclude the possibility of a person not developing an SUD.

The framework synthesizes social learning theory, stress and coping, social determinants of health, ecology, and biopsychosocial models of health. It distinguishes between structural determinants, social contexts, individual agency, and varying degrees of risk and opportunity. The framework illustrates pathways and barriers including social and material resources, stressful conditions" and adverse events, as well as personal resilience and protective factors. While addressing structural and societal barriers as well as stigma implies the need to integrate other social and environmental policies, the availability of effective and accepted treatments is a major obstacle to the implementation of prevention and care programs.

REFERENCE LIST

[1] Amaro, H., Sanchez, M., Bautista, T., & 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

[2] Bandura, A. (1977). Social learning theory. Prentice Hall.

[3] Grummitt, L., Kelly, E., Barrett, E., Keyes, K., & Newton, N. (2021). Targets for intervention to prevent substance use in young people exposed to childhood adversity: A systematic review. PLOS ONE, 16(6), e0252815. https://doi.org/10.1371/journal.pone.0252815

[4] Leza, L., Siria, S., López-Goñi, J. J., & Fernández-Montalvo, J. (2021). Adverse childhood experiences (ACEs) and substance use disorder (SUD): A scoping review. Drug and Alcohol Dependence, 221, 108563. https://doi.org/10.1016/j.drugalcdep.2021.108563

[5] Lin, C., Cousins, S. J., Zhu, Y., Clingan, S. E., Mooney, L. J., Kan, E., Wu, F., & Hser, Y.-I. (2024). A scoping review of social determinants of health's impact on substance use disorders over the life course. Journal of Substance Use and Addiction Treatment, 166, 209484. https://doi.org/10.1016/j.josat.2024.209484

[6] Loke, A. Y., & Mak, Y.-W. (2013). Family process and peer influences on substance use by adolescents. International Journal of Environmental Research and Public Health, 10(9), 3868–3885. https://doi.org/10.3390/ijerph10093868

[7] Rodríguez-Ruiz, J., & Espejo-Siles, R. (2025). What moderates the link between peers' and individual's substance use in adolescence? A systematic scoping review. Adolescent Research Review, 10, 285–307. https://doi.org/10.1007/s40894-024-00247-x

[8] Stephenson, L., Van Den Heuvel, C., & Byard, R. W. (2024). Socioeconomic and psychosocial determinants of substance misuse—a national perspective. Forensic Science, Medicine and Pathology, 20, 1499–1508. https://doi.org/10.1007/s12024-023-00702-6

[9] Trucco, E. M. (2020). A review of psychosocial factors linked to adolescent substance use. Pharmacology Biochemistry and Behavior, 196, 172969. https://doi.org/10.1016/j.pbb.2020.172969

[10] Vakalahi, H. F. (2001). Adolescent substance use and family-based risk and protective factors: A literature review. Journal of Drug Education, 31(1), 29–46. https://doi.org/10.2190/QP75-P9AR-NUVJ-FJCB

[11] Vilsaint, C. L., Tansey, A. G., Hennessy, E. A., Eddie, D., Hoffman, L. A., & Kelly, J. F. (2025). Recovery housing for substance use disorder: A systematic review. Frontiers in Public Health, 13, 1506412. https://doi.org/10.3389/fpubh.2025.1506412

[12] Volkow, N. D., & 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

[13] Watts, L. L., Hamza, E. A., Bedewy, D. A., & Moustafa, A. A. (2024). A meta-analysis study on peer influence and adolescent substance use. Current Psychology, 43, 3866–3881. https://doi.org/10.1007/s12144-023-04944-z

[14] Zhu, J., Racine, N., Devereux, C., Hodgins, D. C., & Madigan, S. (2025). Associations between adverse childhood experiences and substance use: A meta-analysis. Child Abuse & Neglect, 168(Part