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A Scoping Review of Factors Contributing to Relapse in Substance Use Disorders

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ABSTRACT

Substance use disorder is a significant global public health concern that affects individuals, families, and communities. Recovery from substance use disorder is typically characterized by relapses, which are backsliding moments in the recovery process. This scoping review will present the significant determinants of relapse for individuals with substance use disorder consisting of biopsychosocial determinants, Post-traumatic stress disorder, childhood trauma, neurodevelopmental determinants, and environmental cues. The literature has also identified determinants of relapse that consist of family-expressed emotion, peer pressure, cravings, negative affect, and psychological vulnerabilities. Besides this, the review also emphasizes the role of healthcare interventions in preventing relapse by employing a multidisciplinary strategy that integrates pharmacological interventions with psychosocial care. This scoping review employed the framework provided by Arksey and O'Malley (2005) to explore the determinants of substance use disorder relapse. The review thematically and systematically selected studies to identify gaps and inconsistencies within studies. The evidence suggests a multifaceted interrelationship between the biological, psychological, and social determinants sheds valuable light on mechanisms of relapse and informs future research and clinical interventions. Lastly, substance use disorder relapse is the result of complex interplay between determinants that are psychological, social, and environmental. Successful measures to prevent relapse require an integrative treatment strategy that combines medical, psychological, and social interventions to bring about enduring recovery. The research underscores measures such as comprehensive education programs that focus on the adverse consequences of addiction on the individual, family, and society. Modifying prevention programs to safeguard against substance abuse.

Keywords: Scoping Review, Factors, Relapse, Substance Use, Disorders.

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1. Introduction

Substance use disorders (SUDs) are a global public health issue that affects millions of individuals, families, and communities around the world. Characterized by harmful substance use patterns, SUDs include a large array of substances like alcohol, opioids, stimulants, and hallucinogens, among other drugs. Despite improvements in recovery programs and treatment, relapse is a common and often unavoidable part of the recovery process for many. Relapse is the resumption of substance use following a period of abstinence or successful treatment. Relapse is the culmination of an intricate interrelationship between biological, psychological, and social determinants. Knowledge about these determinants is important to the creation of the right kind of prevention and intervention strategies that can help bring about sustainable recovery and alleviate the burden of SUDs from individuals and the community (Latimore et al., 2023).

The process of recovery from substance dependence is not often linear, and recurrence is commonly considered a setback instead of a failure. Relapse can be a learning opportunity to improve, with the added benefit of information regarding individuals' triggers and challenges with recovery maintenance. This review will discuss the complex nature of recurrence of substance use disorder through the examination of theoretical models, contributing factors, and evidence-informed interventions applicable to preventing recurrence. This study synthesizes the evidence to explain the causes of recurrence and the necessity for multidisciplinary treatment (Guenzel & McChargue, 2019).

2. Purpose and Scope of the Review

The major goal of this review is to describe and consolidate the existing body of literature on the factors contributing to relapse in substance use disorders. Specifically, the review attempts to:

1. **Explore Theoretical Frameworks**: Analyse main theories elucidating relapse, including the Disease Model Theory, the Cue-Reactivity Theory, and the Integrated Treatment Model, to establish a foundational comprehension of the mechanisms that govern relapse.

2. **Identify Contributing Factors**: Examine the biological, psychological, and social determinants that elevate the likelihood of relapse, including childhood trauma, post-traumatic stress disorder (PTSD), stress, neurodevelopment, and environmental factors.

3. **Classify Substance Use Disorders**: Summarise the many categories of Substance Use Disorders (SUDs), such as alcohol, opioids, stimulants, hallucinogens, and polysubstance use, and examine the impact of each category on relapse tendencies.

4. **Describe Relapse Correlates:** Describe factors associated with relapse, including family-expressed emotion, peer influence, psychological stressors, cravings, and exposure to triggers.

5. **Evaluate Treatment and Prevention Strategies**: Examine evidence-based approaches, encompassing medical treatments (e.g., pharmacotherapy), psychosocial therapies (e.g., cognitive-behavioral therapy, motivational interviewing), and relapse prevention methods, to ascertain optimal practices for diminishing relapse rates.

6. **Highlight the Role of Healthcare Professionals**: Examine the essential functions of psychiatric mental health nurses and community mental health nurses in assisting persons with substance use disorders, especially with relapse prevention and sustained recovery.

This review encompasses a comprehensive array of substances and variables that contribute to relapse. It utilises both historical and present research to offer a comprehensive perspective on the challenges and opportunities associated with relapse in substance use disorders. This study seeks to merge theoretical insights with practical treatments to enhance clinical practice, direct future research, and foster the creation of more effective, patient-centered relapse prevention strategies.

This study aims to connect theory and practice by providing a thorough analysis of the factors contributing to relapse in substance use disorders and the ways to limit these risks. This study seeks to assist healthcare practitioners, researchers, and policymakers in enhancing outcomes for individuals with substance use disorders.

3. Literature Review

Despite tremendous attempts to overcome substance misuse, relapse remains a challenge for those who have experienced it. The excessive use of psychoactive substances, such as alcohol, illegal drugs, or prescription medications that negatively impact a person's physical, mental, and emotional health is known as substance abuse (Stringer, 2024). Substance misuse, on the other hand, refers to the improper or erroneous use of substances, such as taking prescribed medication over what is recommended, which eventually results in substance abuse. Relapse is the term used to describe the recurrence of drug or alcohol use following a time of abstinence or recovery, and it is commonly associated with the recovery process from substance misuse. That being said, a relapse does not guarantee failure. For many people, it is a typical and expected aspect of the healing process, and it can be viewed as a chance for development and education (Runyan, 2024).

The history of all substance abuse types, such as cannabis, coca, alcohol, and opium poppy, is discovered and extracted from natural plants (Crome & Nutt, 1960). Ancient societies, including the Egyptians, Greeks, and Chinese, understood the therapeutic benefits of these natural plants to treat their ailments, ease the suffering of warriors during battle, change consciousness, and be used for recreational and spiritual purposes (Jones & Vigo, 2023). Additionally, because there was a lack of knowledge about illnesses and the benefits of the plants, such as increased energy, alertness, stamina, relaxation, happiness, drowsiness, and peace, the use of medicinal plants in ancient times was based on experience (Fitzgerald et al., 2020). A more methodical approach to . scientific researchers' shift in focus until the sixteenth century to identify active compounds in plants and their mechanisms of action (Saxon, 2024).

3. 1. Theoretical Framework

3. 1. 1. Disease Model Theory

According to the disease model theory, relapses are caused by modifications to the brain's reward system and compromised decision-making abilities. Disease model theory, according to (Paul, 2022), stresses the need to view abuse as a medical problem rather than a moral failing and the necessity of all-encompassing treatment strategies that address the psychological and physical components of abuse (Smith, 2021)

3. 1. 2. The Cue-Reactivity Theory

According to the cue-reactivity theory, certain signals, such as the smell of alcohol or drug paraphernalia, can set off addictive behaviors by triggering the brain's reward system, which in turn causes cravings and ultimately relapse (Reinhard, 2021). According to Evans (Guy-Evans, 2020), this theory emphasises the importance of identifying and managing these triggers in addiction treatment and relapse prevention strategies.

3. 1. 3. Integrated Treatment Model

The integrated therapy strategy reduces relapse rates and improves care quality by amalgamating several therapies for co-occurring illnesses. It differs from traditional methods like simultaneous or parallel treatment, which addresses both conditions by several providers, and sequential or serial treatment, which focuses on one ailment at a time. Additionally, this model is favored for treating patients with substance abuse because it addresses all diagnoses and symptoms within a single agency or service system, combining the psychological and physical components of addiction, such as the use of medications and support groups, which makes it more effective at treating the full person (Panoo, 2023).

3. 2. Factors that Contribute to Substance Use Disorders

3. 2. 1. Biopsychosocial Approach

Substance abuse and use problems are more likely to occur when biological variables, such as genetic susceptibility and family history of addiction, are present. Addiction and craving are the result of adaptations brought on by neurochemical imbalances and dopamine release in the brain. Substance use disorders may manifest at particular ages in individuals with distinct physiologies, such as teenagers and young adults, because of phases of brain development (Nestler, 2025). Psychological aspects that were taken into A common coping strategy for stress, anxiety, depression, or emotional pain, substance misuse frequently co-occurs with mental health conditions. Previous experiences can make a person more vulnerable to drug use disorders (Greener & Storr, 2023). Social elements include peer pressure, the familial environment, socioeconomic considerations, cultural acceptance, and trauma as a coping technique all have an impact on substance use. Substance abuse risk is raised by financial difficulty, illiteracy, and a lack of work options (Halsey & Boodhai, 2018).

3. 2. 2. Childhood Trauma

Childhood trauma is one of the most frequent causes of drug use disorders in people. A history of traumatic childhood experiences, such as physical and sexual abuse, is often present in those with substance use problems (Mackey, 2020). Furthermore, scientists asserted that physical and sexual abuse throughout infancy causes psychological and mental health issues in maturity, which in turn encourages substance dependence. Interpersonal violence incidents like physical assault, mugging, sexual assault, and kidnapping are associated with the highest lifetime consumption risk of all drug kinds, and they also increase the possibility that children will use drugs (Greener & Storr, 2023).

3. 2. 3. Post-Traumatic Stress Disorder (PTSD)

Post-traumatic stress disorder (PTSD) is another factor that contributes to substance abuse. One of the most prevalent co-occurring mental diseases that contribute to substance addiction is post-traumatic stress disorder. People with this disorder use substances as a coping method to manage their feelings and symptoms. Three clusters of symptoms are indicative of post-traumatic stress disorder (PTSD): intrusive reexperiencing (unwanted trauma memories, reminders, and flashbacks); emotional numbness, or avoiding reminders of prior trauma; and hyperarousal and hypervigilance. People with PTSD frequently turn to substance addiction as a coping mechanism to manage their anxiety and avoid dealing with the impacts of trauma.

3. 2. 4. Stress

Because stress increases cortisol levels in the body, which can worsen symptoms of anxiety and depression, stress is a major contributing factor to substance misuse. As a coping strategy to overcome these unpleasant feelings, some people may turn to drugs. Homeostasis is upset by stress, which also triggers physiological reactions and anticipatory behavior. An increase in

impulsivity and a decrease in behavioral control are the outcomes of high stress, which causes the striatum to become more sensitive and the prefrontal cortex to become less active. Chronic stress response activation also raises the risk of psychopathology, including alcohol and drug addiction. The HPA axis is impacted by chronic stress, which may intensify the effects of drugs. Substance abuse disrupts this axis, making it difficult for people to cope with stress (Runyan, 2024).

3. 2. 5. Brain Development

Stressors in life and early childhood trauma can have an impact on brain development. These factors have a significant impact on a person's brain development and can result in long-term issues like mental health issues, which raise the likelihood of substance use disorders. Early neural network development is influenced by both genetic information and environmental factors, and either of these factors can reduce the brain's ability to operate in later life stages. Furthermore, when a child's brain is still developing, exposure to trauma or outside stimuli triggers the amygdala, which is responsible for emotional regulation and flight response. This can have long-term effects on emotional regulation and harmful behaviors like substance abuse (Mousali et al., 2021).

3. 2. 6. Environmental

Environmental factors include family conflict, social networks, poverty, peer pressure, trauma, stress, and wealthy people because of their accessibility, cost, and social acceptance can all have an impact on substance use disorders. Additionally, the neighborhood's characteristics include economic inferiority and violent crime. These elements might help create an environment where people are more likely to turn to drugs as a coping strategy to get away from their environment (Walker et al., 2024).

3. 3. Types of Substance Use Disorder

3. 3. 1. Alcohol

Fermentation procedures employing sugar sources such as malted barley, grapes, or berries are utilised to abuse a psychoactive drug (Barerah, 2018). Ethanol, the primary active component of alcoholic beverages, is produced by this process from sugars (Karlsson, 2024). Slurred speech, hangovers, and problems with focus, memory, and judgment are all signs of intoxication (Mosel, 2024b). Tremors, sweating, nausea, vomiting, anxiety, irritability, hallucinations, seizures, and delirium are typical withdrawal symptoms. Young adults, especially those in their late teens and early twenties, are most likely to abuse alcohol because of stress, coping strategies, and peer pressure. Latvia and other Eastern European Union nations have the highest rates of alcohol consumption, at about 19% (Rehm et al., 2021).

3. 3. 2. Sedatives, Hypnotics, and Anxiolytics

Classified as CNS depressants, sedatives, hypnotics, and anxiolytics, these are medications used to treat anxiety and sleep disorders; they are frequently referred to as "downers." Also known as sedatives, sleeping medicines, or tranquilizers. Because of their soothing properties, these drugs are frequently recommended to treat anxiety disorders, sleeplessness, and specific medical diseases, including muscular spasms or seizures. Slurred speech, poor coordination, fatigue, disorientation, memory loss, and mood swings are all signs of intoxication, which happens when someone takes more medicines than is recommended (LaGrotta & Thomas, 2020). On the other hand, sudden drug withdrawal can result in a number of negative symptoms, including anxiety, sleeplessness, perspiration, tremors, nausea, vomiting, elevated blood pressure, heart rate, hallucinations, seizures, autonomic hyperactivity, and psychomotor agitation (Simone & Bobrin, 2020).

3. 3. 3. Stimulants (Euphoriants)

Euphoriants, often known as stimulants, are medications that are categorized as central nervous system stimulants. They work by interacting with many neurotransmitter systems, such as the dopamine and norepinephrine systems, to stimulate central nervous system activity. Amphetamines, methylphenidate, cocaine, and illegal substances like methamphetamine can all contribute to alertness, energy, focus, and attention in the end. They are sometimes called "uppers" because they boost vitality and mood (Spinks, 2023). Additionally, stimulant intoxication causes mood changes, increased energy, and alertness. However, within hours to days of stopping stimulants suddenly, people may develop withdrawal symptoms, commonly referred to as crash symptoms. Fatigue, depression, heightened appetite, agitation, insomnia, anxiety, restlessness, trouble focusing, and drug cravings are some of these symptoms (Buffo, 2024).

3. 3. 4. Hallucinogens

Often referred to as psychedelics, hallucinogens are a class of psychoactive compounds that affect perception and emotion. They are also the most widely used as illegal narcotics. Treatments for mental health conditions like anxiety, depression, and post-traumatic stress disorder (PTSD) may involve the use of hallucinogens. Misuse, however, can result in euphoria, relaxation, well-being, changed perception, increased hunger, nausea alleviation, and problems with sociability (Miller, 2024). Symptoms of intoxication brought on by hallucinogens include distorted reality perception, euphoria, changed perception of time and space, and visual and aural hallucinations. Although they don't usually result in withdrawal or physical dependence, some people may have psychological "flashbacks" to hallucinogenic effects. Furthermore, among men and young adults aged 20 to 29, the United States had a higher rate of hallucinogen usage, ranging from 0.62% to 9.32%.

3. 3. 5. Inhalants

Inhaling a psychoactive drug that alters one's thoughts is called inhalant abuse, sometimes referred to as solvent abuse, volatile substance misuse, sniffing, huffing, and bagging. Aliphatic and aromatic hydrocarbons, which are present in gasoline, glue, paint thinner, and spray paint, are common inhalants. It is also utilised in cleaning and housekeeping items. Addicts experience respiratory side effects ranging from coughing and wheezing to dyspnea, emphysema, and pneumonia since the inhalants are absorbed through the lungs (Radparvar, 2023). Higher doses of inhalants can cause stupor or coma. Inhalant intoxication causes euphoria, altered consciousness, decreased coordination, dizziness, hallucinations, delusions, nausea, vomiting, headaches, impaired judgment, fast heart rate, and psychomotor slowness. Withdrawal symptoms such as irritability, mood fluctuations, sleeplessness, anxiety, elevated heart rate, and perspiration can occur when inhalant use is reduced or stopped. Additionally, the highest prevalence of inhalant use in Ireland is among teenagers and adolescents, who make up about 18% of the population (Koposov et al., 2018).

3. 3. 6. Cannabis

Tetrahydrocannabinol (THC) and Cannabidiol (CBD) are two of the more than 60 cannabinoids found in cannabis, commonly referred to as marijuana or weed. The plant's upper leaves, flowering tops, and stems are used to make marijuana. The female plant's leaves are used to make hashish, a dried sticky exudate. Cannabis is a hemp plant that is grown for its fiber, which is used to manufacture oil, paper, rope, and clothing. It is used recreationally for pleasure and relaxation as well as in medicine to reduce pain, inflammation, and regulate seizures and spasms (Florimbio, 2024). Euphoria, a changed sense of time, relaxation, hunger, memory loss, bloodshot eyes, and dry mouth are some of the signs of intoxication. Irritability, sleeplessness, anxiety, decreased appetite, restlessness, mood swings, headaches, chills, and sweating are some of the milder withdrawal symptoms. However,

compared to alcohol or narcotics, cannabis withdrawal is usually less severe. Approximately 35.4% of young people in the US use it, making it one of the most popular drugs in the country (NIDA, 2019).

3. 3. 7. Opioids

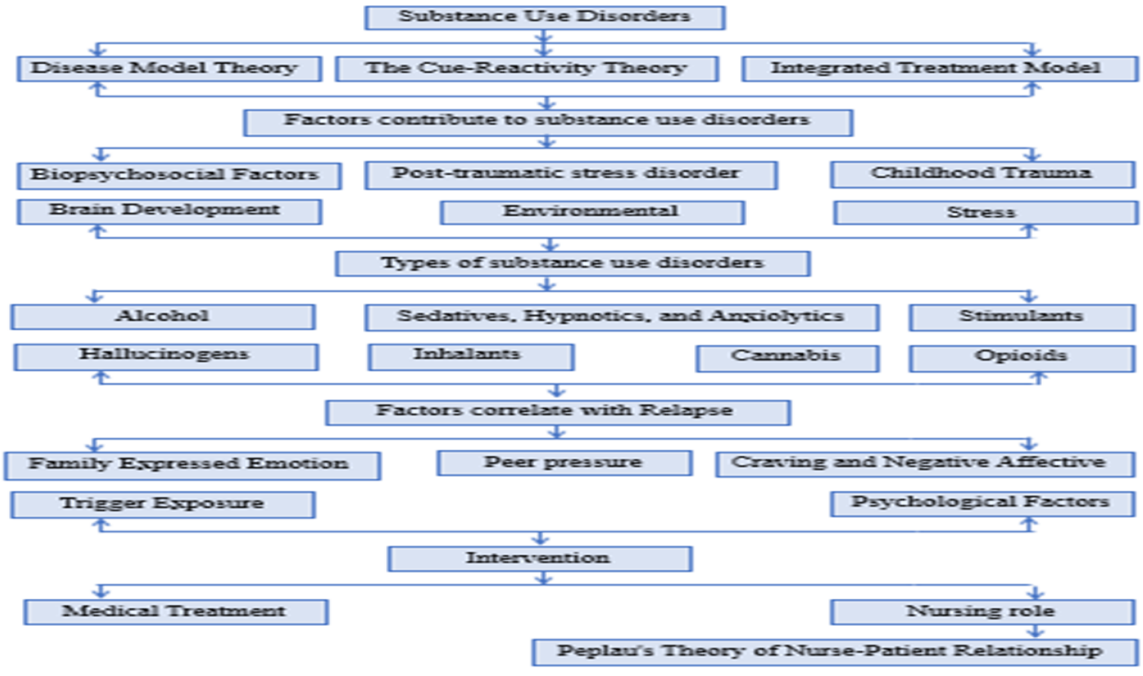
Because they can desensitize users to both physical and psychological pain, opioids are a common substance of abuse that produces feelings of euphoria and wellbeing. Strong prescription analgesics, including heroin, codeine, meperidine, and morphine, are among these substances. However, abusing opioids causes reliance, which affects a person's mental and physical health (Azadfard et al., 2023). Euphoria, altered consciousness, slurred speech, reduced coordination, constricted pupils, drowsiness, and a lowered breathing rate are all signs of opioid intoxication, which appears shortly after the initial euphoric experience. Anxiety, sleeplessness, muscle aches, nausea, vomiting, diarrhea, sweating, chills, yawning, pupil dilatation (the reverse of constricted pupils when drunk), and cravings for opioids are some of the symptoms associated with withdrawal. Additionally, opioids are used by around 5.8% (296 million) of the world's population.

3. 3. 8. Polysubstance Use

According to (Linda, 2022), polysubstance use is the use of two or more drugs that are misused concurrently. Drug combinations can result in harmful intoxication effects that affect the person in multiple ways, including immune system degeneration, bodily issues like kidney and liver damage, and cognitive function impairment. For instance, combining stimulants with opioids can increase heart rate and blood pressure, which can lead to brain damage, heart attacks, and strokes. Accordingly, the polysubstance disorder may cause further difficulties that could eventually result in unexpected mortality (Boileau-Falardeau et al., 2022).

4. Conceptual Framework

The conceptual framework illustrates the factors influencing substance use disorders and relapse based on theoretical models such as the Disease Model Theory and Cue-Reactivity Theory. It categorizes types of substance use disorders, identifies relapse-related factors, and highlights treatment interventions, including medical and nursing roles, as shown in the diagram.



5. Negative Consequences of Substance Abuse

Substance misuse frequently affects people through a variety of symptoms, such as tolerance, which is the gradual decrease in a substance's effectiveness and the need for the user to take larger doses to have the desired effect (Ragab & Hassabo, 2021). Additionally, intoxication is a transient and reversible condition that affects the central nervous system (CNS) and causes behavioral or psychological changes, including decreased mood, judgment, social functioning, motor skill performance, and cognition. Furthermore, the person has psychological symptoms like anxiety, despair, and strong cravings as well as physical withdrawal symptoms like nausea, sweating, and tremors when they attempt to cut back on or quit using the substances (Jahan & Burgess, 2021).

An individual's mental and emotional health is greatly impacted by substance misuse, which can result in mental health conditions like anxiety, sadness, and psychosis. Physical issues include respiratory and neurological disorders, liver damage, heart disease, and a compromised immune system. Additionally, it has detrimental effects on a person's life in severalareas. It may have a detrimental effect on relationships, job performance, or academic achievement. Also, there are legal and financial challenges. Additionally, substance use can result in a number of problems, such as neglecting obligations, abandoning social activities, participating in risky behaviors like illegal activity or unprotected sex, and continuing to use even when the substance could have exacerbated physical or psychological issues (Saquib, 2019).

6. Relapse After Successful Recovery

In substance use disorders, relapse refers to the resumption of drug or alcohol use after a period of abstinence or a successful course of treatment. Relapses are prevalent during the rehabilitation process, with the first episode typically occurring within the first year of treatment. Additionally, there is no appreciable distinction between the relapse rates of addictive behaviors and those of other chronic conditions such as diabetes, hypertension, and asthma. Additionally, between three weeks and six months after therapy, relapse rates might range from 40 to 75 percent. Nonetheless, a relapse does not imply weakness or failure. For many people, it is a normal and expected aspect of the recovery process. It can be viewed as a chance for learning and development since it gives insight into the obstacles and triggers that must be overcome to stay sober (Webber, 2023)

6. 1. Difference between the Relapse and Lapse

The term "substance use disorder relapse" describes the return to drug or alcohol use following a period of successful rehabilitation or abstinence. Resuming addictive behaviors and the inability to sustain sobriety for an extended period of time at the same or higher level are further characteristics of this condition (Saquib, 2019). It is a brief setback in a person's recovery journey and describes a brief period of time when someone who has been working towards sobriety relapses and engages in substance abuse again, in contrast to lapses or slips, which are one-time (slip) or brief occurrences (lapses) during the recovery process. Furthermore, the relapse should be viewed as a setback on the road to recovery rather than a failure. Relapse is a regular component of the path to long-term sobriety, and it is crucial to recognize that substance misuse is a complicated disease (Guenzel & McChargue, 2019).

6. 2. Factors Correlated with Relapse

6. 2. 1. Family Expressed Emotion

Relapse in substance abuse patients is significantly influenced by family members' emotional expression. Three to five factors—criticism, aggression, emotional over-involvement, and positivity and warmth—are evaluated in order to gauge the home environment. In many illnesses, high EE levels are strong indicators of relapse and can impair the prognosis. While hostility

is a negative attitude toward a patient, frequently blaming them for their issues, criticism is a complaint about a patient's behavior. The feelings and actions of a family member toward the patient that show excessive praise or blame, self-sacrifice, and overprotectiveness are known as emotional over-involvement.

Patients who experience high levels of emotional engagement may come to believe that they are powerless to solve their own issues and that they are caused by outside forces. Though it shows a different side from hostile and critical attitudes, emotional over-involvement is comparable to the negative effect that triggers a relapse, which causes the patient to revert to their sickness as a coping technique. Warmth and positive reinforcement are crucial in creating a supportive environment for addicts. Warmth increases motivation, self-esteem, and the therapeutic partnership while decreasing shame and stigma, whereas positive evaluations recognize progress and accomplishments (Shanmugam et al., 2021).

6. 2. 2. Exposure to Triggers

Exposure to triggers, which are experiences or circumstances—such as specific locations, people, or items associated with substance misuse—can rekindle urges and entice people to abuse substances. First, the medications' accessibility and availability. Second, negative emotions like despair, rage, and frustration are caused by interpersonal issues and conflicts between family and friends. Uncontrolled confrontations can result in relapses; in fact, over 50% of all relapses were found to be caused by conflicts. Peer pressure is another element because friends and acquaintances can have a significant impact on a person's conduct. People may feel strongly compelled to use substances or other addictive behaviors again if they are around peers who do so. Additionally, people may experience pressure to engage and comply in order to fit in or keep their social relationships. Accordingly, relapse is strongly predicted by each of these characteristics (Hardey et al., 2023).

6. 2. 3. Psychological Factors

Psychological elements, such as emotional issues like loneliness, sadness, disappointment, rage, despair, coping mechanisms, boredom, stress from work and marriage, and stigma, can cause relapses in substance misuse (Parisi, 2019). High levels of stress and inadequate coping mechanisms also contribute to the actions of addicts, who use them to escape or numb their feelings and deal with the overwhelming challenges in their lives. They could find it difficult to control their stress and run the risk of relapsing if they don't have good coping strategies in place (Ackermann, 2024). Furthermore, maintaining rehabilitation requires a solid support network since it gives people the motivation and direction they need when things get tough (Azmi et al., 2018).

6. 2. 4. Craving and Negative Affect

The relapse phase of substance addiction is significantly influenced by cravings and negative affect states. For main drugs of abuse, craving—the subjective desire to use substances—is a powerful predictor of resuming substance use. According to the negative reinforcement model, the need to alleviate negative emotions like pain, depression, and anxiety is what motivates drug-seeking and relapse. Decision-making in rehabilitation is hampered by unpleasant emotions such as mental strain, boredom, depression, tension, and despair. To stay sober, people with substance use disorders need to manage these feelings (Panoo, 2023).

6. 2. 5. Peer Pressure

One of the things that causes substance addiction patients to relapse is peer pressure. Alcohol and drug addicts often hang out with others who have similar drinking and drug-using habits. When an addict is around people who are still using drugs, they may relapse while in recovery. Social scientists use the "Social Learning Theory" as a framework to study peer pressure. This idea discusses how people learn from one another, including how social contact and praise can directly reinforce a person's conduct. Additionally, social learning theory includes cognitive processes and learning from others, which can undermine

recovery goals and result in emotional vulnerability, temptation, social acceptance, and lack of support. People may find it difficult to resist the temptation to use drugs when they are enticed, particularly when they are in vulnerable situations (Hardey et al., 2023)

7. Treatment

7. 1. Detoxification

Often called a detox, this medical procedure is the first step in treating substance use problems and safely eliminates substances like alcohol or psychiatric medicines from the body. Its functions are to control withdrawal symptoms, maintain mental and physical health, and avoid complications. Also used during physical symptom detoxification are substance-type specific drugs like methadone to manage opioid withdrawal symptoms and benzodiazepines to manage alcohol withdrawal symptoms. Increased fluid intake, a balanced diet plan, non-addictive analgesics to relieve headaches and body pain, and a relaxed atmosphere that supports resting and minimizes stress are some ways to control the physical symptoms (Kemp, 2019). Emotional support, stress-reduction strategies, counseling, and therapies such as cognitive behavioral therapy and motivational interviewing manage psychological complications. These interventions induce relaxation, minimize stress, and alleviate the load of psychological disorders (Das, 2020).

7. 2. Cognitive Behavioral Therapy (CBT)

Changing unhealthy behaviors and encouraging positive changes to one's life are the major goals of cognitive behavioral therapy (CBT). To guarantee lasting rehabilitation, the therapy assists patients to develop coping strategies, enhance the capacity to make decisions, and create a support system (Parisi, 2019). In addition to this, CBT also encompasses skills training such as self-talk therapy that supports substance abuse patients to shift the thought from a negative one to a positive one. After the patient has identified the opposite thought and worked on it, the therapist will assist the patient to replace it with a positive one such as stress management, problem-solving skills, or a rational thought. CBT reduces the chance of relapse by assisting to create an efficient coping mechanism to a given situation (see Appendix 1). It also encompasses strategies to guarantee lasting recovery such as relapse prevention, mindfulness, and cognitive restructuring (Miller, 2024).

7. 3. Support Group (12-step program)

Support groups like Alcoholics Anonymous and Narcotics Anonymous, which are part of the 12-step program (see Appendix 2), can give people a secure and accepting environment in which to talk about their problems and experiences. According to (Spinks, 2023), these programs frequently use an organized methodology that consists of accountability, sponsorship or mentorship, and the chance to network with people who have experienced comparable difficulties.

7. 4. Family Therapy

Teaching the family to build supportive relationships, emotional reassurance, and low criticism promotes high self-esteem, a better self-image, and stronger family ties, increasing the likelihood of recovery and lowering the danger of relapse. Additionally, including family members in education and treatment programs helps them better understand the difficulties that addicts confront, which can enhance empathy and communication within the family (Morgen, 2024).

7. 5. Regular Motivational Interviewing (MI)

Motivational interviewing (MI), a person-centered counselling technique that supports clients in initiating and maintaining good behavioral changes, is crucial for substance misuse treatment on a regular basis (Frankenburg, 2019). It empowers clients to take charge of their journey toward positive transformation by fostering a supportive environment through reflective statements, open-ended inquiries, and sympathetic listening (Mosel, 2024a).

7. 6. Relapse Prevention Strategies

In order to prevent relapsing into addictive behaviors, relapse prevention techniques are essential for those in recovery from substance abuse disorders or addiction. It's critical to recognize triggers like peer pressure and substance exposure. People can avoid reverting to old patterns by learning coping mechanisms, such as talking to a therapist or joining a support group, practicing mindfulness and relaxation techniques, taking up healthy hobbies, and creating a strong support system. Relapse risk can be decreased by changing one's lifestyle to include a healthy diet and regular exercise. Establishing a support network, which includes talking to friends and family and going to support groups, can also help people remain on course by offering accountability, motivation, and a feeling of belonging.

Maintaining sobriety and recognizing relapse warning signals require regular therapy sessions, self-evaluations, and medical check-ins. Long-term recovery requires ongoing treatment and monitoring even after official rehabilitation. Evidence-based treatments for the emotional components of addiction should be made available, and behavioral therapy and counselling should be promoted. Lastly, encouraging self-care entails looking after oneself when one is lacking something or is upset. It entails doing constructive things like journaling, working out, spending time with loved ones, and conversing with encouraging people (Menon & Kandasamy, 2018).

8. Psychiatric Mental Health Nurse Role

When it comes to patients who abuse drugs, the psychiatric mental health nurse plays a vital role. To determine the best course of action for each patient, the psychiatric mental health nurse first assesses the kind, quantity, and duration of usage. In order to assist patients in creating plans to prevent relapses, nurses teach them coping mechanisms. And to guarantee a comprehensive approach to addiction recovery, the nurses also work in conjunction with other medical specialists. Additionally, the nurses offer counselling and education regarding healthy lifestyle choices and coping strategies (Zhao & Li, 2018). Throughout the healing process, nurses offer patients emotional support, inspiration, and empowerment. By building trusting relationships with patients and advocating for their needs, nurses lower the likelihood of relapse. As a result, patients remain inspired and engaged in their care. Further, nurses ensure that patients follow the treatment plan, monitor side effects, and give the medication as directed (Kaswa, 2021).

By teaching patients how to deal with peer pressure situations that lead to relapses, creating a support system, and encouraging healthy coping mechanisms like assertiveness training and self-confidence building, nurses can help patients navigate peer pressure. This can assist patients in circumventing the adverse effects of peer pressure and facilitate informed decisions regarding their rehabilitation. Furthermore, by fostering conflict resolution skills, implementing family therapy interventions, enhancing constructive communication techniques, and cultivating a more supportive environment that encourages the patient's recovery while mitigating the risk of relapse, nurses can shape the influence of family-expressed emotions on relapse (Shanmugam et al., 2021).

9. Role of Community Mental Health Nurse

The role of the community mental health nurse is crucial to primary, secondary, and tertiary prevention of substance use. The primary preventive measure is promoting holistic well-being through evidence-based interventions such as awareness programs and education. Community nurses are able to inform individuals about the risks of addiction and the adverse impacts on physical, social, and emotional well-being. Besides this, community nurses are also able to collaborate with other medical professionals and local organizations to develop holistic preventive interventions that address the causative determinants for addiction and relapse such as peer pressure and family emotional expression (Latimore et al., 2023).

Secondary prevention nurses treat patients with substance use disorders to implement early interventions that prevent the progression of addiction. This can be through different approaches such as medication-assisted therapy, support groups, and counseling to enable individuals to manage addiction and reduce the likelihood of relapse. Secondary prevention also focuses on ongoing monitoring and follow-up care to ensure sobriety and good health (Kaswa, 2021).

The type, quantity, and duration of usage are integral components of the tertiary preventive conduction assessment. During the withdrawal process, nurses must consistently monitor patients' vital signs, administer medications to alleviate discomfort, and provide emotional support. To ensure a holistic approach to addiction recovery, nurses collaborate with other medical professionals, educate patients on coping strategies, and aid them in formulating relapse prevention plans. Furthermore, the nurse must evaluate and document the patient's health and treatment response, as well as monitor the patient's physical and psychological well-being throughout the treatment process and any complications that may arise (Kaswa, 2021).

10. Peplau's Theory of Nurse-Patient Relationship

Nurses can address drug use problems utilising the framework established by Peplau's theory of interpersonal relationships. The nurse-patient interaction fosters a collaborative therapeutic process, enabling patients to articulate their thoughts, feelings, and emotions, so enhancing understanding and aiding nurses in addressing each patient's distinct needs. Besides cultivating coping strategies and instructing patients on managing addiction triggers and relapse, the nurse can also discern the factors that contribute to substance use and recurrence (Olufunke & Oluwakorede, 2016).

11. Methodology:

The selection and analysis process was informed by Arksey and O'Malley's (2005) framework for conducting scoping reviews to ensure a thorough and transparent process. The five steps to the framework—developing the research question, identifying relevant studies, selecting studies, charting the data, and compiling, summarizing, and reporting findings—were undertaken carefully to ensure thoroughness and adherence to criteria. Systematic and thematical selection and analysis of the literature was conducted to ensure comprehensive synthesis of the determinants of substance use disorder (SUD) relapse. By adhering to scoping review guidelines and frameworks, the present review presents an unambiguous and comprehensive view of the current knowledge, highlights gaps within the literature, and informs clinical practice and future research. To ensure the validity and transferability of the findings, a consultation phase was undertaken using experts within the addiction treatment sector and individuals with lived experience of SUD.

12. Discussion

The evidence from this scoping review indicates a complex interplay between biological, psychological, and social mechanisms that underpin substance use disorder (SUD) relapse. Comparison between studies reveals certain trends, gaps, and

discrepancies that are informative about the mechanisms underlying relapse and that will be valuable to future research and clinical care.

12. 1. Patterns in the Literature

1. **Biological Factors**:

   - **Brain Development and Neurobiology**: Numerous studies emphasise the influence of early childhood trauma and chronic stress on brain development, especially in areas related to reward processing and impulse regulation, such as the prefrontal cortex and amygdala. These alterations heighten susceptibility to substance use and relapse (Mousali et al., 2021; Nestler, 2025).

   - **Genetic Predisposition**: A consistent topic in research is the influence of genetic predisposition on substance use disorders, with a familial history of addiction serving as a notable predictor of relapse (Greener & Storr, 2023).

2. **Psychological Factors**:

   - **Craving and Negative Affect**: Craving, frequently elicited by environmental stimuli and adverse emotional conditions (e.g., stress, depression), is universally recognised as a significant predictor of relapse (Panoo, 2023; Reinhard, 2021).

   - **Co-occurring Mental Health Disorders**: PTSD, anxiety, and depression are frequently associated with higher relapse rates, as individuals often use substances to self-medicate.

3. **Social Factors**:

   - **Family Expressed Emotion**: High levels of criticism, hostility, and emotional over-involvement within families are strongly correlated with relapse (Githae, 2015; Shanmugam et al., 2021)

   - **Peer Pressure and Social Networks**: Exposure to peers who use substances significantly increases relapse risk, particularly among adolescents and young adults (Hardey et al., 2023).

4. **Environmental Factors**:

   - **Accessibility of Substances**: Proximity to substances and exposure to triggers (e.g., drug paraphernalia, locations associated with substance use) are consistently linked to relapse (Guy-Evans, 2020).

   - **Socioeconomic Stressors**: Poverty, unemployment, and lack of social support create environments that exacerbate relapse risk (Walker et al., 2024).

12. 2. Gaps in the Literature

1. **Limited Research on Polysubstance Use**:

2. While studies on individual substances (e.g., alcohol, opioids) are abundant, there is a notable lack of research on polysubstance use and its unique relapse patterns. This gap limits our understanding of how interactions between multiple substances influence relapse risk (Boileau-Falardeau et al., 2022).

3. **Cultural and Gender Differences**:

4. Few studies explore how cultural and gender-specific factors influence relapse. For example, the role of stigma, gender-based trauma, and cultural norms in relapse remains underexplored, particularly in non-Western contexts.

5. **Long-Term Outcomes of Integrated Models**:

6. Although integrated treatment models are widely recommended, there is limited longitudinal research on their long-term effectiveness in preventing relapse (Panoo, 2023).

7. **Technology-Based Interventions**:

8. While digital tools (e.g., apps, telemedicine) show promise in relapse prevention, there is insufficient evidence of their efficacy and accessibility across diverse populations.

12. 3. Inconsistencies in the Literature

1. **Role of Pharmacotherapy**:

   While some studies emphasize the effectiveness of pharmacotherapy (e.g., methadone, naltrexone) in reducing cravings and withdrawal symptoms, others highlight its limitations, particularly in addressing psychological and social factors (Jahan & Burgess, 2021; Kemp, 2019).

2. **Definition of Relapse**:

   There is variability in how relapse is defined across studies. Some define it as a single episode of substance use, while others view it as a return to chronic use. This inconsistency complicates comparisons and generalisations (Guenzel & McChargue, 2019).

3. **Effectiveness of Peer Support Groups**:

   While many studies advocate for the benefits of peer support groups (e.g., Alcoholics Anonymous), others question their accessibility and effectiveness for individuals with co-occurring mental health disorders (Spinks, 2023).

12. 4. Interaction of Factors and Influence on Relapse Risk

The interplay of biological, psychological, and social factors creates a dynamic and multifaceted risk profile for relapse. For example:

- **Biological and Psychological Interactions**: Chronic stress and trauma can lead to neurobiological changes that increase susceptibility to cravings and impair decision-making, creating a cycle of substance use and relapse (Runyan, 2024)

- **Psychological and Social Interactions**: Adverse emotional conditions (e.g., depression) might intensify familial discord and social seclusion, hence heightening the chance of recurrence (Hardey et al., 2023).

- **Environmental and Social Interactions**: Interaction with substance-abusing peers in high-risk settings (e.g., disadvantaged neighbourhoods) increases the probability of recurrence, especially in those with inadequate coping mechanisms (Walker et al., 2024)

- These connections underscore the necessity for comprehensive treatment strategies that encompass the entirety of causes leading to relapse. For example, integrating medication with psychosocial therapies (e.g., cognitive-behavioral therapy, family therapy) can address both the biological and social aspects of relapse risk (Panoo, 2023).

12. 5. Implications for Practice and Research

1. **Integrated Treatment Models**:

   The results highlight the significance of comprehensive therapy models that concurrently address biological, psychological, and social aspects. Subsequent research ought to concentrate on assessing the enduring efficacy of these models among varied populations.

2. **Personalised Interventions**:

   Due to the heterogeneity in relapse risk factors, personalised interventions customised to individual requirements (e.g., trauma-informed care, gender-specific programs) are crucial for enhancing outcomes.

3. **Technology-Based Solutions**:

   Augmenting research on digital tools and telemedicine can improve access to relapse prevention options, especially for marginalised communities.

4. **Addressing Polysubstance Use**:

   Further research is required to comprehend the distinct issues of polysubstance use and formulate focused solutions.

5. **Standardizing Definitions and Metrics**:

   Standardising criteria of relapse and implementing uniform outcome measures will enhance the comparability and generalisability of the next investigations.

This scoping study underscores the intricate and interrelated processes that lead to relapse in substance use disorders (SUDs). The review establishes a basis for future research and clinical innovation by finding patterns, gaps, and inconsistencies in the literature. It is crucial to address these issues using integrated, personalised, and evidence-based strategies to decrease relapse rates and enhance long-term recovery results.

13. Conclusion

In summary, substance use disorders (SUDs) are a complex group of mental illnesses with harmful alcohol and opioid consumption habits. Relapse, commonly referred to as the resumption of substance use following a period of sobriety or successful treatment, depicts the chronic and cyclical nature of addiction fueled by psychological vulnerabilities, exposure to traumatic events and adverse affective states, social pressures, environmental cues, cravings, and negative affect. Relapse is a predictable and normative component of the recovery process that is shaped by biological, psychological, and social

determinants. Effective relapse prevention calls for an integrative multidisciplinary treatment plan that addresses the entire spectrum of addiction. Pharmacotherapy is essential to control withdrawal symptoms and alleviate cravings. Psychosocial therapies, including cognitive behavioural therapy (CBT), motivational interviewing (MI), and contingency management, enable individuals to cultivate coping mechanisms for addressing stress, triggers, and emotional difficulties. Establishing robust therapeutic relationships and delivering ongoing support via counselling, peer group initiatives, and family therapy are crucial for maintaining long-term recovery. Healthcare providers, particularly psychiatric nurses and community mental health nurses, play a crucial role in helping individuals recover through the rehabilitation process. Relapse in substance use disorders requires a shift in paradigm, where the understanding of relapse is changed from one of failure to one where it is seen as a learning opportunity for growth. Future research should focus on individualized care and the use of new technology in therapeutic interventions.

14. Recommendations

This scoping review's findings offer a number of recommendations to inform future research, clinical practice, and policy regarding substance use disorders (SUDs) and recurrence. There is an urgent need for models that address the biological, psychological, and social aspects of recurrence simultaneously. The existing evidence is consistent with the interrelatedness of the components such that interventions that address one component are unlikely to be sustainable. The integration of medication to manage cravings and withdrawal with psychosocial interventions like cognitive-behavioral therapy (CBT) and family therapy can offer a more comprehensive strategy to preventing recurrence. Furthermore, trauma-informed care must be integrated into models of care because childhood trauma and post-traumatic stress disorder (PTSD) are key determinants of recurrence. Secondly, forthcoming research should emphasise customised interventions designed to address the specific requirements of persons with substance use disorders (SUDs). Due to the heterogeneity in relapse risk factors, including genetic predisposition, concurrent mental health conditions, and social contexts, personalised interventions can enhance treatment success. Gender-specific programs and culturally tailored treatments can tackle the distinct issues encountered by various populations. Additionally, further investigation is required on polysubstance use, as existing literature primarily emphasises single-substance disorders. Comprehending the distinct relapse patterns and treatment requirements of individuals who engage in polysubstance use is crucial for formulating successful therapies.

Christian and Muslim clergy are highlighted for their counsel on promoting moral principles and avoiding addiction. Sports participation at a young age can shield kids from addiction in adolescence. Addiction is a cause and result of unemployment, hence it is also included. Education programs are created to teach students to be resistant to addiction and to appreciate the dreadful burden that addiction puts on individuals, families, and communities. Policymakers are also encouraged through the media to be aware of substance abuse problems and to create programs for preventing them.

The role of technology-enabled interventions in preventing relapse also warrants further research. Digital interventions like mobile apps and telemedicine can help improve the accessibility of therapy and offer real-time support to recovering individuals. More evidence is required to ascertain the effectiveness of these interventions and ensure availability to various groups, particularly those from resource-limited settings. Standardised measures and criteria for relapse must also be formulated to improve the comparability and generalisability of the evidence. The lack of uniformity in the operationalisation of relapse across studies currently makes evidence synthesis and the development of evidence-based recommendations problematic.

Ultimately, programs for public health and policy must address the social and environmental determinants that cause relapse. This means decreasing stigma, making therapy more available, and encouraging recovery-conducive environments. Community programs that address the socioeconomic determinants that cause poverty and unemployment can help to lower the rate of

relapse. Together with a multidisciplinary and holistic strategy, researchers, clinicians, and policymakers can collaborate to enhance the outcomes for substance use disorder patients and lower the burden that relapse causes to individuals, families, and society.

List of Abbreviations

SUD: Substance Use Disorder.

CBT: Cognitive Behavioral Therapy.

CBD: Cannabidiol.

CNS: Central Nervous System.

U.S: United States. X_{82}^{206}

AA: Alcoholics Anonymous.

NA: Narcotics Anonymous.

Conflict of Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Data Availability

No data was used for the research described in the article.

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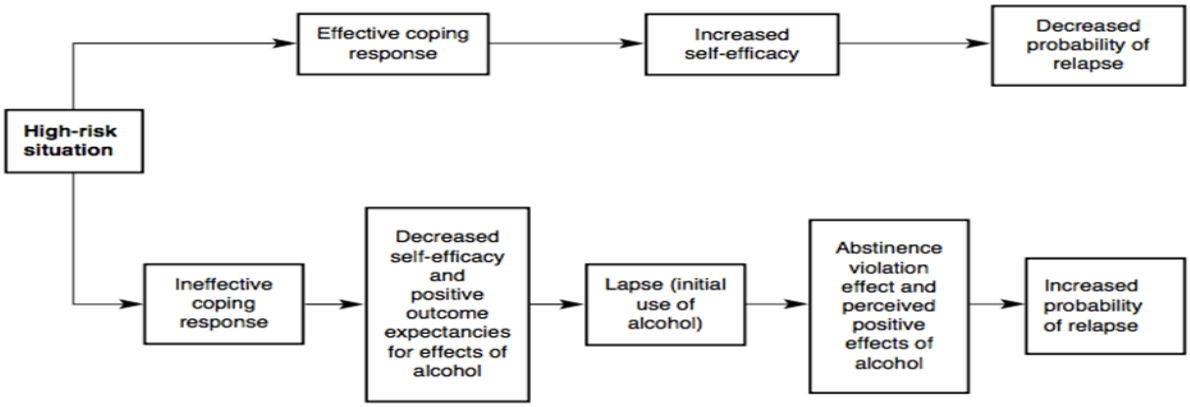
Appendices

- Appendix 1. clarifies the cognitive-behavioral model of the relapse process and posits a central role in high-risk situations and in the drinker's response to those situations. People with effective coping responses have confidence that they can cope with the situations like increased self-efficacy, thereby reducing the probability of a relapse.



- Appendix 2. clarifies the 12-step program for substance abuse to provide a structured framework for individuals struggling with addiction to overcome their dependencies and achieve long-term recovery.

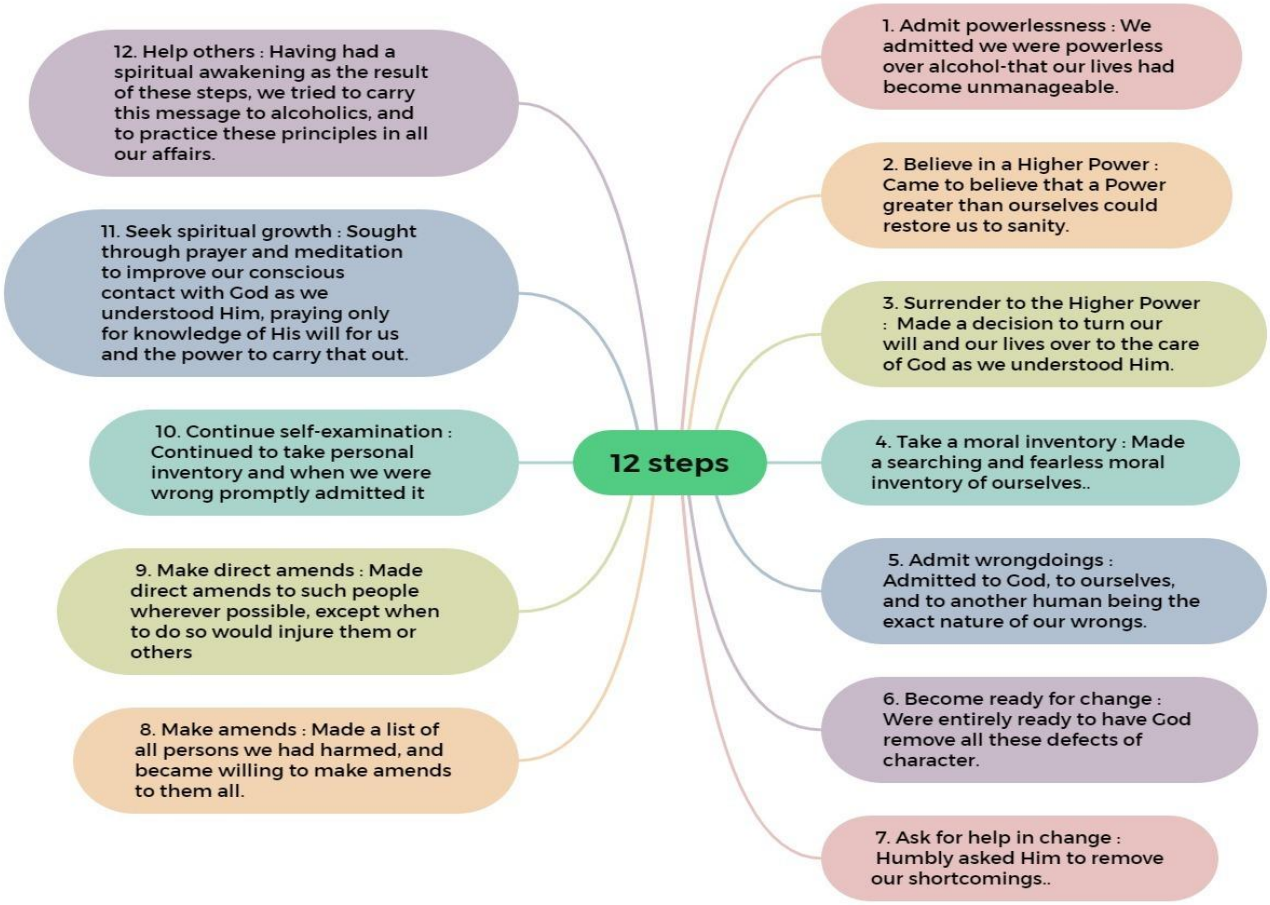


Table 1: Distribution of Studies Addressing Key Factors Contributing to Relapse in SUDs

Factor Category	Subcategory	Number of Studies	Key Findings
Biological Factors	Brain Development	8	Early trauma and stress impact brain regions involved in reward processing.
	Genetic Predisposition	6	Family history of addiction increases relapse risk.
	Neurochemical Imbalances	5	Dopamine dysregulation and reward system changes drive cravings.
Psychological Factors	Craving and Negative Affect	12	Cravings and negative emotions (e.g., stress, depression) are strong predictors.
	Co-occurring Mental Health Disorders	10	PTSD, anxiety, and depression increase relapse risk.
	Coping Mechanisms	7	Poor coping skills exacerbate relapse risk.
Social Factors	Family Expressed Emotion	9	High criticism and emotional over-involvement in families correlate with relapse.
	Peer Pressure	8	Exposure to substance-using peers increases relapse likelihood.

	Socioeconomic Stressors	6	Poverty, unemployment, and lack of support create high-risk environments.
Environmental Factors	Accessibility of Substances	7	Proximity to substances and triggers increases relapse risk.
	Neighborhood Characteristics	5	High-crime and economically disadvantaged areas exacerbate relapse risk.
Interventions	Pharmacotherapy	10	Medications like methadone and naltrexone reduce cravings and withdrawal.
	Psychosocial Therapies (e.g., CBT)	12	CBT and motivational interviewing improve coping skills and reduce relapse.
	Support Groups (e.g., AA, NA)	8	Peer support groups provide accountability and social reinforcement.
	Family Therapy	6	Family therapy improves communication and reduces conflict.

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